INDEX OF ABSTRACTS
Volume 15, 1968

Aalto, S. K. An iterative procedure for solving nonlinear equations in a Banach space, 379.

Abian, Alexander. Fixed point theorems for mappings, 351; Generalized completeness theorem and solvability of systems of Boolean polynomial equations, 539; On solvability of Boolean polynomial equations in one unknown, 545; The maximal ideal theorem for p-rings, 756; Decomposition of atomic and orthogonally complete rings, 622.

Accola, R. D. M. Strongly branched coverings of closed Riemann surfaces, 238; Riemann surfaces of genus three admitting automorphism groups isomorphic to the four group, 348; On certain groups of automorphisms of closed Riemann surfaces, 541; On Riemann surfaces of genus two admitting an automorphism of period three, 634.

Aczel, Jonas. On isomoment functional equations, 164.

Addison, J. W., Jr. Separation principles in difference hierarchies, 238.

Adler, Andrew. A recursively unsolvable problem in the theory of differential equations, 757.

Agarwal, R. P. Certain basic integral operators and hypergeometric transformations, 205; Certain fractional q-integrals and q-derivatives, 531.

Agoston, M. K. A classification of immersed knots, 1046.

Ahlberg, J. H., Nilson, E. N. and Walsh, J. L. Cubic splines on the real line, 191.

Ahlfors, L. V. Kleinian groups and Eichler integrals, 539.

Ahluwalia, D. S. See Lewis, R. M.

Ahmad, Shair. Split dilations of finite cyclic groups, 197; Dynamical systems of characteristic 0^+, 940.

Aissen, Michael. Means and minimization of errors, 171.

Akemann, C. A. Sequential convergence in the dual of a W*-algebra, 134.

Al-Amir, H. S. The a-points of Faber polynomials for a special function, 145.

Alas, O. T. Seven propositions equivalent to the Zermelo theorem, 805.

Alexander, C. C. Quasi-developable spaces. Preliminary report, 810; Quasi-developable spaces. II. Preliminary report, 941.

Alford, W. R. and Sher, R. B. Defining sequences for compact 0-dimensional decompositions of n-space, 780.

Allen, P. J. Quotient structure of a semiring, 150.

Alo, R. A. and Shapiro, H. L. Extensions of totally bounded pseudometrics, 127; A note on compactifications and semi normal spaces, 212.

Alter, Ronald. On a necessary condition for the validity of the Riemann hypothesis for functions that generalize the Reimann zeta functions, 215.

Amemiya, Ichiro and Sato, Daihachiro. Continuous, non-piecewise rational (algebraic) function which assumes rational (algebraic) values at all rational (algebraic) points and irrational (trancendental) values at all irrational (trancendental) points, 338.

Anderson, D. R. and Bogdanowicz, W. M. On existence of solutions to a functional integro-differential equation in Banach spaces, 143.

Anderson, E. H. Approximation of certain continuous functions of S^2 into E^3, 143.

Anderson, L. R. Integral manifolds of a class of 3rd order autonomous differential equations, 639.

_____. See Lazer, A. C.

Anderson, R. D. Infinite-dimensional σ-compact sets, 538.

Anderson, R. D. and Schori, R. M. Factors of infinite-dimensional manifolds, 765.

Anderson, R. V. See De Cicco, John.

Anderson, W. N., Jr., and Duffin, R. J. Series and parallel addition of matrices, 734.

Andrews, G. E. A generalization of the classical partition theorems, 370.

Andrews, J. J. and Lomonaco, S. J. The second homotopy group of 2-spheres in 4-space, 724.

Andrews, P. B. Resolution with merging, 401.

Anshel, Michael. The endomorphisms of some one-relator groups, 100.

Anshel, Michael and Clay, J. R. Geometric interpretations of planar near-rings, 100.

Antonelli, P. L. Smooth MS fiberings with finite singular sets, 354; On the stable diffeomorphism question for homotopy spheres, 542; Some results on stable diffeomorphism of spheres, 650.

Appling, W. D. L. A near-point theorem, 212; A minimum problem, 348; Concerning the linearity of a certain transformation, 506; Continuity and continuous products, 543; Summability and smallest range-including closed sets, 921.

Apter, John. See Whitlock, H. I.

Arbib, M. A. The automata theory of semigroup embeddings, 387.

_____. See Give'on, Y.

Arbib, M. A. and Give'on, Y. Algebra automata. I: Parallel programming as a prolegomena for the categorical approach, 387.

Armentrout, Steve. Homotopy properties of decomposition spaces, 181; A decomposition of E^3 into straight arcs and singletons, 727.

Aronszajn, Nachman. Metric characterization of bordered Riemannian manifolds; intrinsic regular border of a Riemannian manifold, 116.

Arora, K. L. and Gupta, P. R. Magnetohydrodynamic flow due to an oscillating infinite plane, 721.

Arruda, A. I. On the postulate of separation, 399, 949.

_____. See da Costa, N. C. A.

Artemiadis, Nicolas. Growth estimates of functions in L^1, 134.

Artiga, Lucio. See Elcrat, A. R.

Artmann, Benno. On Hjelmslev planes and modular lattices with a homogeneous basis of chains, 151.

Artzy, Rafael. Conics in projective planes, 770.

Askey, Richard and Fitch, James. Integral representations for Jacobi polynomials, 769; Some positive trigonometric sums, 769.

Asner, B. A. Some properties of the Hurwitz matrix, 742.

Asplund, Edgar. Fréchet differentiability of convex functions, 235.

Atalla, R. E. Linear operators on spaces of continuous functions, 621.

Atalla, R. E. and Bustoz, Joaquim. On sequential cores and a theorem of R. R. Phelps, 626.

Atherton, Charles. Concerning the ideal and order topologies on a lattice. Preliminary report, 620.

Atkin, A. O. L. and Lehner, J. The Hecke-Petersson theory for certain subgroups of the modular group, 911.

Atkinson, K. E. and Sharma, A. A partial characterization of poised Hermite-Birkhoff interpolation problems, 550.

Aull, C. E. Collectionwise normal subsets (continuation), 158; Remark on countable paracompactness, 382; Products of ideals. Preliminary report, 903; Submetrization, 944.

Auslander, Joseph. Homorphisms of minimal sets, 646.

Bacon, Philip. Compact means in the plane, 1030.

Bailey, J. L. The product of a certain class of decomposition spaces and E^1 is E^4, 557.

Bajaj, P. N. Connectedness properties of start points in semidynamical systems, 793.

Baker, J. D. and Wright, F. M. On the Young refinement integral and the interior refinement integral, 764.

Baker, J. E. See Wright, F. M.

Baker, J. W. Some uncomplemented subspaces of C(X) of the type C(Y), 925.

Bakshi, J. S. Solution for nonlinear deflections in an elastic pressurized spherical shell under diametrial compression, 201.

Balbes, Raymond. A representation theory for prime and implicative semilattices, 221; On (J,M,m)-extensions of order sums of distributive lattices, 635.

Balbes, Raymond and Horn, Alfred. Injective and projective Heyting algebras, 913; Stone lattices, 1040.

Ballou, D. P. Solutions of nonlinear hyperbolic Cauchy problems without convexity conditions, 745.

Banchoff, T. F. Polyhedral monkey saddles, 187.

Bancroft, Peter. Calculus of set-valued functions. Preliminary report, 218.

Bank, Steven. On the structure of a fundamental set of solutions near an irregular singularity, 552.

Banks, H. T. Variational problems involving functional differential equations, 181.

Barback, Joseph. A note on prime regressive isols. Preliminary report, 370.

Bareiss, E. H. Numerical inversion of finite Toeplitz matrices, 780.

Barnes, D. C. Some complements of Hölder's inequality, 186; Bounds for the higher eigenvalues of vibrating systems, 732.

Barnier, W. J. The Jiang subgroup for a map, 181.

Baron, S. Factorization and characterization of adjoint functors. Preliminary report, 366.

Barrar, R. B. and Loeb, H. L. Nonlinear uniform approximation with interpolation, 929.

Barros-Neto, Jose. Kernels associated to elliptic problems, 386.

Barry, D. G. See Charmonman, Srisakdi.

Barth, K. F. and Schneider, W. J. On a problem of Bagemihl and Erdös concerning the distribution of the zeros of an annular function, 131; On the impossibility of extending the Riesz uniqueness theorem to holomorphic functions of slow growth, 210; An asymptotic analog of the F. and M. Riesz radial uniqueness theorem, 532; On a problem of Collingwood concerning meromorphic functions with no asymptotic values, 637; An entire transcendental function which takes rationals to rationals and irrationals to irrationals, 762; On a problem of C. Renyi concerning Julia lines, 908; Products of functions in MacLane's class a with bounded functions, 1035.

Baskett, T. S. See Katz, I. J.

Basu, S. K. Some results on the total relative strength of the Riesz and Nőrlund methods, 373; A supplementary note on comparison of the total strength of some Hausdorff methods. II, 649.

Batt, Jürgen. On compactness and vector measures, 510.

Batt, Jürgen and Berg, E. J. A theorem about weakly compact operators on the space of continuous functions on a compact Hausdorff space, 363.

Baumgartner, James. On the cardinality of dense subsets of linear orderings. I, 935.

Baxley, J. V. Eigenvalues of singular differential operators by finite difference methods. Preliminary report, 1022.

Baxter, W. E. On rings with proper involution, 230.

Baer, H. S. The part metric in a cone, 740.

Beasley, L. R. and Brenner, J. L. Bounds for permanents, determinants, and Schur functions, 735.

Becker, J. C. Thom classes, 531.

Bednar, J. B. Projections on affine spaces. Preliminary report, 214.

Beekman, J. A. Green's functions for generalized Schroedinger equations, 515.

Beidleman, J. C. Generalized Frattini subgroups of finite groups. II, 124.

Beineke, L. W. On the derived graphs and digraphs, 135.

Beineke, L. W. and Pippert, R. E. Minimal regular extensions of oriented graphs, 144; The enumeration of labeled 2-trees, 384.

Belna, C. L. A result on the n-segment property, 639.

Benac, T. J. and Murphy, C. M. Primal decomposition in noncommutative Noetherian systems. Preliminary report, 167.

Ben-Israel, Adi. See Zlobec, S.

Ben-Israel, Adi and Charnes, Abraham. An explicit solution of a special class of linear programming problems, 505.

Ben-Israel, Adi, Charnes, Abraham, and Kortanek, K. O. On asymptotic duality and intersections of cones and subspaces, 736.

Bennett, H. F. If I have N apples. An elementary proof of the Goldbach conjecture, 762.

Bennett, M. K. Generalized convexity lattices, 776; States on orthomodular lattices, 165.

Beraha, Sami. An unusual matrix and its extensions, 192; Two-entried matrices whose inverses are also two-entried, 787; A matrix problem of combinatorial approach and analytic aim, 914.

Berard, A. D., Jr. Characterizations of metric spaces by the use of their midsets, 941.

Berg, E. J. See Batt, Jürgen.

Berg, K. R. Entropy, convolution, and disjointness, 779.

Berger, M. S. On nonlinear elliptic boundary value problems of von Karman type, 159.

Berger, T. R. Class two p groups as fixed point free automorphism groups, 192; Odd p groups as fixed point free automorphism groups, 658.

Berkowitz, H. W. GC counterexample to a theorem of T. Homma. Preliminary report, 378; Piecewise linear approximations of homeomorphisms. Preliminary report, 731.

Berlekamp, E. R. and Graham, R. L. Irregularities in the distributions of finite sequences, 125.

Berlowitz, Bernard. Analytic continuation of local functional equations. I, 906.

Bernstein, H. J. Extensions of Jajós' factorization theorem to some non-Abelian groups, 382; CCN-groups of order divisible by three primes, 1039.

Bernstein, Leon. On diophantine equations of degree $n \geq 2$ in n variables, 739.

Berthiaume, Pierre. The functor evaluation, 523.

Bhirud, R. L. Behaviour of Padé fractions and

the associated quantities, 123; Pascal's triangle and the exponential function, 535.

Biallas, D. P. K. On incidence-groups with a weak-affine structure. Preliminary report, 511.

Billis, Mitchell. Finite groups whose powers have no countably infinite factor groups. Preliminary report, 162.

Binz, E. Convergence function algebras and c-embedded convergence spaces, 223.

Birman, J. S. Braid groups and their relationship to mapping class (homeotopy) groups, 782; Nonconjugate braids can define isomorphic knots, 939.

Blair, D. E. and Stone, A. P. A note on flat manifolds, 154.

Blake, R. G. A nonassociative noncommutative partially ordered ring, 1017.

Blakley, G. R. Four axioms for commutative rings, 730.

Block, R. E. Differentiably simple algebras, 536; Differentiably semisimple rings, 1027.

Bloom, S. L. The hyperprojective hierarchy, 343.

Blumenthal, L. M. Metric postulates for normed Boolean algebra, 237.

Boehme, T. K. and Powell, R. E. Generalizations of the Taylor transform generated by analytic functions, 94.

Bogar, G. A. Comparison theorems for linear differential operators. Preliminary report, 528.

Bogdanowicz, W. M. Radon-Nikodym differentiation of one vector measure with respect to another, 119; On Pettis-Dunford-Phillips property for vector-valued volumes, 190; Existence and characterization of the smallest and the greatest measures generating the same Lebesgue integral, 507, 949; On analytic extensions of holomorphic functions with values in the space of continuous functions, 627; Infinitely linear bounded continuous operators on multiplicative products of Banach spaces, 750; Existence of analytic extensions of holomorphic functions with values in the space of Lebesgue summable functions, 792.

_____. See Anderson, D. R.

Bogdanowicz, Witold and Heyn, Hans. Volumes generated by Daniell functionals on the space of all continuous functions on a normal topological space, 89.

Bogdanowicz, W. M. and Mattamal, M. M. Representation of complete Lebesgue integrals by means of volumes, 129; Representation of noncomplete Lebesgue integrals, 194; Stone's spaces of Banach space valued functions generated by Lebesgue integrals, 757.

Bogdanowicz, Witold and Zander, Vernon. Infinite products of probability volume spaces, 750; A Fubini-Jessen theorem for the generalized Lebesgue-Bochner integral, 906.

Bogdanowicz, Witold, Diestel, Joseph and Zander, V. E. Generalized Lebesgue-Bochner integral for Orlicz spaces, 918.

Bolstein, Richard and De Branges, Louis. Gauss spaces of entire functions, 741; Jacobi spaces of entire functions, 741.

Bonar, D. D. On annular functions. Preliminary report, 236; Characterizations for annular functions. Preliminary report, 794; An annular function related to Weierstrass's nondifferentiable function, 921.

Bond, J. W. Derivation algebras of finite abelian group algebras, 81.

Bonnett, D. A. and Porter, J. R. Matrix characterizations of topological properties, 390.

Book, R. V. Linear-time nondeterministic languages are real-time nondeterministic. Preliminary report, 813.

Book, R. V. and Greibach, S. A. Quasireal-time languages. Preliminary report, 814.

Boone, J. R. A metrization theorem, 220; Some characterizations of paracompactness in k-spaces, 938.

Booth, D. D. Sequential compactness, 374; Increasing sets of degrees, 548; Some consistency questions in topology, 641.

Bose, A. K. A note on entire functions of bounded index, 525.

Bourne, S. G. On semi-invariant measure on a locally compact semigroup, 906.

Bowman, R. H. On the extensive derivative, 510.

Boyce, W. M. The bond seller's dilemma, 744.

Boyte, J. M. Open convergence and closure sets, 556; Closure sets, 812; Pointwise countable paracompactness, 1007.

Brace, J. W., Friend, G. D. and Richetta, P. J. Locally convex topologies on functions spaces, 208.

Bradley, G. H. and Willner, L. B. Distance between two convex sets, 394.

Bradley, J. C. Products of representations on discrete groups, 904.

Bradley, J. S. Conditions for the existence of conjugate points for a fourth order linear differential equation, 529.

Bragg, L. R. and Dettman, J. W. A class of related Dirichlet and initial value problems, 635.

Brannan, D. A. On univalent polynomials, 157.

Brannan, D. A. and Kirwan, W. E. Coefficient estimates for some classes of bounded univalent functions, 791.

Brauer, A. T. and Gentry, I. C. On the characteristic roots of tournament matrices, 1011.

Brawley, J. V., Jr. Certain sets of involutory matrices and their groups, 770; On the ranks of bases of vector spaces of matrices, 1020.

Brechner, B. L. Homeomorphism groups of dendrons, 551.

Brennan, J. E. Existence of invariant subspaces, 797; Boundedness of point evaluations. II, 919.

Brenneman, F. S. See Uehara, Hiroshi.

Brenner, J. L. Applications of the Dieudonné determinant, 1024; Graph-theoretic proof of convergence for Dantzig's algorithm for solving the transportation problem, 338.

____. See Beasley, L. R.

Breuer, Manfred. Fredholm theories in von Neumann algebras. II, 97.

Brewer, J. W. Ohm's property (n) for field extensions, 352; A note on the ideal transform and integral closure in Noetherian domains, 645.

Briggs, R. C. Weak and strong cover compactness in first countable and locally compact spaces. Preliminary report, 396; More about weak and strong cover compactness, 633.

Brillhart, J. D. On the Euler and Bernoulli polynomials, 123, 818.

Brooks, J. K. and Reichelderfer, P. W. A Jordan decomposition for weight functions, 104.

Brooks, R. B. S. and Brown, R. F. A lower bound for the Δ-Nielsen number, 106.

Brown, H. I. Replaceability of methods of summation, 90.

Brown, H. I. and Stratton, H. H. The structure of B [c] and extensions of the concept of conull matrix, 920.

Brown, J. B. Connectivity, semicontinuity, and the Darboux property, 506; Nowhere dense Darboux graphs, 559; Totally discontinuous connectivity functions, 1020.

Brown, J. K. Finite groups have automorphisms of large order. Preliminary report, 233.

Brown, J. W. On zero type sets of Laguerre polynomials, 90; An infinite set of generating relations, 400.

Brown, K. M. See Dennis, J. E., Jr.

Brown, R. D. Generalized wave operators for finite-dimensional perturbations of self-adjoint operators, 771.

Brown, R. F. On the Nielsen fixed point theorem for compact maps, 1025.

Brown, R. F. See Brooks, R. B. S.

Brown, S. H. A property of quasi-injective abelian groups, 1008.

Bruckner, A. M., Ceder, J. G. and Weiss, M. L. On the differentiability structure of real functions, 148.

Bruckner, A. M. and Rosenfeld, M. Continuity in abstract measure spaces via differentiation bases. Preliminary report, 1033.

Bruckner, A. M., Ceder, J. G. and Kesten, R. Representations and approximations by Darboux functions in the first class of Baire, 237.

Bruter, C. P. Construction de matroides à partir d'un matroide donné, 391; Construction des matroides, 557; Le critere de minimalite en combinatoire, 654.

Bryant, J. L. and Seeback, C. L., III. Locally nice manifolds are tame in codimension three, 91.

Buche, A. B. Approximation of semigroups of operators in Fréchet spaces, 203.

Buchi, J. R. Affine definability of affine invariants of Euclidean geometry, 932.

Buchi, J. R. and Danhof, K. J. A strong form of Beth's definability theorem, 932.

Buck, R. C. On certain decidable semigroups, 370; Decidable semigroups, 640.

Buck, W. L. and Horner, D. R. The strict singularity of T and S does not imply the strict singularity of T + S, 616.

Buckley, Joseph. Polynomial functions and wreath products, 171.

Burgess, C. E. Tame subsets of spheres in E^3, 519.

Burton, T. A. and Townsend, C. G. On the generalized Lienard equation, 110.

Busenberg, Stavros. See Kraut, Edgar.

Bustoz, Joaquim. See Atalla, R. E.

Butler, J. B., Jr. On the inverse problem for ordinary differential operators of even order, 83.

Butson, A. T. A configuration related to symmetric block designs. Preliminary report, 905.

Byrd, K. A. On a conjecture of Carl Faith, 1017.

Byrnes, J. S. and Newman, D. J. Completeness preserving multiplies, 732.

Cain, R. N. The Lerey spectral sequence for generalized cohomology, 645.

Callahan, F. P. Further global descriptions of deformations of rings, 764.

Callahan, W. R. Frequency equations for the normal modes of vibration for an elliptical ring, including transverse shear and rotary inertia, 109; Modes of vibrations of a truncated infinite circular sector plate, 723.

Calys, E. G. On some classes of regular univalent functions, 790; A class of regular functions, 919.

Cameron, D. E. Maximally Lindelöf spaces. Preliminary report, 944.

Cameron, R. H. An integral calculus in function space, 334.

Cameron, R. H. and Storvick, D. A. An operator valued function space integral and a related integral equation, 729.

Cannon, J. W. Spheres that are tame modulo tame sets, 519; Singular side approximations of 2-spheres, 556; Characterization of taming sets on 2-spheres, 768.

Cannonito, F. B. A hierarchy of conjugacy problems, 931.

Cantrell, J. C. Some locally flat embedding theorems in codimensions one and two. Preliminary report, 944.

Carlson, R. E. and Cullen, C. G. A characterization of intrinsic functions on quaternion matrices, 98.

Carmichael, R. D. The Paley-Wiener-Schwartz theorem for functions analytic in a half plane. Preliminary report, 509.

Carroll, F. M. Identification and confidence regions, 907.

Casler, B. G. and Smith, T. J. Standard spines of compact connected combinatorial n-manifolds, 136.

Cassens, Patrick and Regan, Francis. On Lambert summability, 520.

Cassity, C. R. The complete solution of the sixth-order Runge-Kutta equations, 728.

Castagna, Frank. Sums of automorphisms of a primary abelian group, 106.

Cateforis, V. C. Flat regular quotient rings, 640; On regular self-injective rings, 781.

Caveny, D. J. Bounded variation in L^p norm, 657; On integral Lipschitz conditions and integral bounded variation, 798.

Caylis, E. G. On the radius of univalence and starlikeness of certain regular functions, 624.

Cecil, D. R. Dihedral products. Preliminary report, 914.

Ceder, J. G. See Bruckner, A. M.

Chacron, Maurice. On the nonsingular positive square matrix of an ordered ringoid. Preliminary report, 127; Structure of a certain class of ordered groupoids. Preliminary report, 239.

Chadam, J. M. Asymptotic properties of the perturbed Klein-Gordon equation, 366.

Chadick, S. R. On continua that are arch cluster sets. Preliminary report, 1019.

Chak, A. M. Polynomial systems satisfying a special functional equation, 205; Some generalizations of Laguerre polynomials. I, 798.

Chalice, D. R. Some characterizations of approximate normality, 95; On the essential set, 620.

Chaney, R. W. On pointwise convergence of Fourier series on the p-adic integers, 189; On uniformly approximable Sidon sets. Preliminary report, 613.

Chang, C. C. A generalization of the Craig interpolation theorem, 934.

Chang, C. C. and Moschovakis, Y. N. On Σ^1_1 relations on special models, 934.

Chao, C. Y. A theorem of nilpotent groups, 189.

Charlap, L. S. and Sah, C. H. Compact flat Riemannian four dimensional manifolds. Preliminary report, 136.

Charmonman, Srisadki and Barry, D. G. Modified Runge-Kutta-Nystrom methods, 904.

Charmonman, S. and Olesky, D. D. An error analysis of reflexive generalized inversion, 737.

Charnes, Abraham. See Ben-Israel, Adi.

Chartrand, Gary and Geller, Dennis. On uniquely colorable planar graphs, 97.

Chartrand, Gary and Kronk, H. V. On the point-dual acyclic numbers of a graph, 110; Randomly traceable graphs, 213.

Chartrand, Gary and Stewart, M. J. Connectivity and line-connectivity of graphs and their line-graphs, 111.

Chartrand, Gary, Kapoor, S. F. and Kronk, H. V. A sufficient condition for N-connectedness of graphs, 111.

Chartrand, Gary, Kronk, H. and Lick, D. R. Randomly hamiltonian graphs, 380.

Chase, P. J. Sublattices of partition lattices, 750.

Chase, S. U. Galois theory and extensions of sheaves, 788.

Chase, W. E. p-close-to-convex functions. I, 749; p-close-to-convex functions. II, 799.

_____. See Rubinstein, Zalman.

Chen, C. C. and Grätzer, G. A. Generalizations of lattices with unique complements, 146.

Chen, K.-T. Homotopy of algebras, 236.

Cheney, E. W. See Schurer, F.

Cheney, E. W. and Schurer, F. On spline interpolation operators, 233.

Cheney, E. W., Hobby, C. R., Wulbert, D. E., Morris, P. D., and Schurer, F. Unicity of the Fourier projection, 948.

Chern, L.-C. Homogeneous morphisms in additive categories, 166.

Chess, K. V. T. Direct sums and normal systems, 556.

Chiang, P. S. Computer investigation of Landau's theorem, 184.

Chihara, T. S. Orthogonal polynomials whose zeros are dense in a half line. Preliminary report, 183.

Childs, D. R. Rigorous solution of the monoenergetic transport equation. I: Slab geometry, 638; Rigorous solution of the monoenergetic transport equation. II: Spherical geometry, 800.

Ching, Wai-Mee. New nonhyperfinite nonisomorphic factors, 549.

Choi, Chang. The complete list of maximal subgroups of Mathieu group of degree 24, 748.

Cholewinski, F. M. See Haimo, D. T.

Cholewinski, F. M. and Haimo, D. T. Generalized temperatures and analytic functions, 232.

Chrislock, J. L. A certain class of identities on semigroups, 656.

Chui, C. K. See Korevaar, Jacob.

Cima, J. A. and Cover, A. S. An extension theorem for holomorphic functions. Preliminary report, 1019.

Citron, R. See De Cicco, John.

Clark, D. M. Diassociative groupoids are not finitely based, 1009.

Clarkson, L. L. A theorem concerning product integrals, 163.

Clay, J. R. See Anshel, Michael.

Cleaver, C. W. Representation of linear functionals in Orlicz spaces. Preliminary report, 524.

Clemens, S. R. The isotopy type of certain finite polyhedra. Preliminary report, 163.

Clements, G. F. The compression of a closed set of three-place k-adic integers is closed. Preliminary report, 364.

Cline, Edward. An application of transfer for the prime three, 554.

Cobb, J. I. Taming almost PL embeddings in codimension 3, 371.

Coburn, L. A. The C*-algebra generated by an isometry, 372.

Cohen, D. W. Extension of locally compact local groups to global groups, 632.

Cohen, H. B. See Sullivan, F. E.

Cohen, Marshall and Sullivan, Dennis. Mappings with contractible point inverses between p.l. manifolds, 186.

Colby, R. R. and Rutter, E. A., Jr. Semiprimary QF-3 rings, 164; QF-rings with zero singular ideal, 643.

Coleman, D. B. and Passman, D. S. The unit group of a modular group algebra, 173.

Collins, H. S. and Summers, W. H. Some applications of Hewitt's factorization theorem, 903.

Colwell, Peter. Subordinations and a class of meromorphic functions, 642.

Comer, S. D. Galois theory and the amalgamation property in finite dimensional cylindric algebras. Preliminary report, 103; Concerning a problem of B. Jonsson, 788.

Comfort, W. W. and Negrepontis, S. Homeomorphs of three subspaces of $\beta N \setminus N$, 92.

Connell, E. H. Constructing nontrivial h-cobordisms, 187.

Connell, I. G. A natural transformation of the Spec functor, 365.

Consul, P. C. On some integrals in operational calculus, 179.

Conway, E. D. and Smith, D. R. An ordering principle for generalized solutions of quasilinear equations of the first order, 113.

Conway, J. H. and Guy, R. K. Sets of natural numbers with distinct sums, 345.

Cook, Howard. Diagonal cutting in Cartesian products, 519.

Cook, S. A. Stack automata and auxiliary pushdown machines. Preliminary report, 1047.

Coppage, W. E. and Luh, Jiang. Radicals of gamma rings. Preliminary report, 376.

Coppin, C. A. Concerning an integral and number sets dense in an interval, 505.

Corduneanu, Constantin. On a class of functional integral equations. Preliminary report, 166.

Courter, R. C. Rings over which every right module is rationally complete, 204; Perfect rings over which no module has a power corational extension. Preliminary report, 529; Corational completeness; a shadow of a new-classic theorem. Preliminary report, 627.

Coury, J. E. On the measure of zero sets of coordinate functions. Preliminary report, 924.

Coven, E. M. Compactness of limit sets and semi-orbit closures, 626; The orbit-closure of an isochronous point is pointwise isochronous, 809.

Cover, A. S. See Cima, J. A.

Cowan, R. E. Angular and oricyclic cluster sets for meromorphic functions. Preliminary report, 1017.

Cox, S. H., Jr. Determinantal rank and flat modules, 737.

Crapo, H. H. Möbius inversion in lattice, 200.

Crapo, H. H. and Rota, Gian-Carlo. The symbolic method for distributive lattices, 815.

Csontos, Peter. On chains of subalgebras. II, Preliminary report, 217.

Csorgo, Miklos. Glivenko-Cantelli type theorems and laws of large numbers for randomized sequences of random variables, 225.

Cullen, C. G. See Carlson, R. E.

Cullen, M. R. H^p spaces and conformal mapping, 817.

Curran, Peter. Cohomology of discontinuous groups, 532.

Currier, A. W. On noncompact solvmanifolds. Preliminary report, 152.

Curtis, D. W. Deficiency in infinite-dimensional spaces. II, 511; Deficiency in infinite-dimensional spaces. I, 553.

Curtiss, J. H. The asymptotic value of a singular integral related to the Cauchy-Hermite interpolation formula, 396; Transfinite diameter and harmonic polynomial interpolation, 1007.

Cusick, T. W. Identities involving powers of persymmetric determinants, 738.

da Costa, N. C. A. and Arruda, A. I. Further considerations on the postulate of separation, 555.

D'Ambrosio, Ubiratan. On hyper-surfaces of limit type, 176.

Dancis, Jerome. When isotopic submanifolds are ambient isotopic, 205.

Dancis, Jerome and Lusk, E. L. Embeddings of bounded topological manifolds, 765.

Danese, A. E. Some properties of Laguerre and Jacobi polynomials, 362.

Danhof, K. J. See Buchi, J. R.

Darwin, J. T., Jr. Kernel functions for linear transformations, 538.

Das, K. M. An inequality similar to Opial's inequality, 723.

Dauns, John. Representation of l-groups and f-rings. Preliminary report, 193.

Daverman, R. J. Deforming simple closed curves into the complement of a surface in E^3, 515.

Daverman, R. J. and Eaton, W. T. Any sewing of two crumpled cubes can be embedded in E^4, 223; Almost any sewing of two crumpled cubes yields S, 354;; The Cartesian product of a line with the union of two crumpled cubes, 542; An equivalence for the embedding of cells in E^3, 653.

Davis, E. D. Analytic independence in Noetherian rings, 177.

Davis, H. W., Murray, F. J. and Weber, J. K., Jr. Inductive and projective limits of L_p spaces, 660.

Davis, R. D. On wildly ramified normal extensions of tamely ramified v-rings, 1016.

Davis, W. J., Dean, D. W. and Singer, Iver. Complemented subspaces and lambda systems in Banach spaces, 137.

Davison, W. F. Composite connections, 345.

Dawson, D. F. Matrix summability of convex sequences, 110; Variation properties of sequences, 520; Summability domains of matrix methods, 794; Some decomposition theorems for semigroups, 913..

Day, J. M. Compact semigroups with square roots, 85.

Dean, D. W. See Davis, W. J.

De Branges, Louis. See Bolstein, Richard

De Cicco, John and Anderson, R. V. Concerning the relative tensor and connections of a conformal space Γ_n, 929.

De Cicco, John and Citron, R. Concerning some relations between contact transformations and solutions of partial differential equations, 655.

De Cicco, John and Walvekar, Arun. The four necessary conditions for a higher order variation problem, 927; Some monogeneity conditions relative to a second derivative of a polygenic function, 1041.

Deeds, J. B. Summability of vector sequences, 127.

de Korvin, Andre. Faithful normal expectations on von Neumann algebras, 148.

DeLeon, M. J. Pisot sequences and Pisot-Vijayaraghavan numbers. Preliminary report, 617.

De Mar, R. F. Uniqueness classes for periodic-type functionals, 207.

DeMarr, R. E. On a square root function, 108.

Demys, K. A limitation on the index of a nilpotent transformation, 336; New roots of

unity generalizing commutative algebra and function theory, 530, 818; Lemniscate inverses of Clifford (so-called "double") numbers, 756.

Dennis, J. E., Jr., and Brown, K. M. On the convergence of a general class of iterative methods, 174.

Denny, J. L. Extensions of a theorem of Maxwell in the dynamical theory of gases, 225.

Derrick, W. R. A weighted volume-diameter inequality for n-cubes, 145; A lower bound for the product of modules, 523.

Derry, Douglas. Polygons of order n with n + 2 vertices, 336.

De Sapio, R. Differentiable structures on a product of spheres, 628.

Dettman, J. W. See Bragg, L. R.

DeVito, C. L. A completeness theorem for locally convex spaces and some applications, 90.

De Vore, Ronald. On Jacksons theorem, 798.

Diamond, H. G. The prime number theorem for Beurling's generalized numbers, 1031.

Diaz, J. B. and McLaughlin, H. W. Polynomial approximation of a set of bounded functions, 778.

Diaz, J. B. and Metcalf, F. T. Iteration procedures and Picard's criterion for equations of the first kind, 118.

Dickey, L. J. A single construction that gives finite hyperbolic planes of even or odd order, 773; An isomorphism of finite regular hyperbolic planes, 802.

Dickman, R. F., Jr. Some characterizations of the Freudenthal compactification of a semicompact space, 80; Real compactifications of arbitrary topological spaces, 561.

Diestel, Joseph. See Bogdanowicz, Witold and Zander, V. E.

Dietrich, W. E., Jr. The maximal ideal space of the topological algebra C(X,E), 797.

Dinerstein, N. T. Finiteness conditions in groups with complemented normal subgroups. Preliminary report, 340.

Ditzian, Zeen. On convolution transforms, 168.

Djokovic, D. Z. On regular graphs, 763.

Doran, R.S. Construction of uniform CT-bundles. Preliminary report, 551.

Dornhoff, L. L. and Spitznagel, E. L. Density of finite simple group orders, 723.

Dorroh, J. R. Semigroups of nonlinear transformations, 128.

Douglas, R. R. and Sigrist, F. Sphere bundles over spheres which are H-spaces, 612.

Dowdy, J. E. See Uehara, Hiroshi.

Doyle, P. H. Alexander's cell theorem without direct limits, 640.

Drake, D. A. Neighbor collineations of Desarguesian Hjelmslev planes, 125.

Drobot, Vladimir. Quasidynamical systems, 218.

Duffin, R. J. See Anderson, W. N., Jr.

Dunham, Charles. Continuity of the varisolvent Chebyshev operator, 353.

Dunn, J. M. See Meyer, R. K.

Duvall, P. F., Jr. Weakly flat spheres, 631; Topological embeddings in codimension one, 652.

Dyer, J. A. A generalized Grynblum condition for Schauder bases, 515.

Dyer, J. A. and Johnson, W. B. Similar generalized bases and isomorphisms, 555.

Dyer, M. N. and Sieradski, A. J. Coverings of mapping spaces, 766.

Dykes, D. C. A note on generalized Frattini subgroups. Preliminary report, 122.

Eakin, P. M., Jr. The converse to a well-known theorem on noetherian rings, 78.

Eakin, P. M., Jr., and Heinzer, William. Nonfiniteness in finite-dimensional Krull domains, 785.

Earle, C. J., Jr. Quasiconformal vector fields, 539.

Easton, R. J. and Wayment, S. G. A mean value theorem and Darboux's property for the derivative of an additive set function with respect to a measure on E, 339.

Eaton, W. T. Tameness of certain types of spheres, 510.

_____. See Daverman, R. J.

Ebbinghaus, H. -D. On the logic with the added quantifier "for most", 394; On the logic with the added quantifier Q (there are uncountably many), 547.

Eberhart, Carl. Metrizability of trees, 124.

Eberly, W. S. Iteration processes for certain bounded operators, 360.

Ecklund, E. F., Jr. Prime divisors of the binomial coefficient, 616.

Edwards, J. R. Characterizing Werkfelder of certain classes of summability methods. Preliminary report, 515.

Effros, E. G. and Gleit, Alan. Structure theory for Choquet simplexes, 778.

Egan, H. L. A class of galois connections between a group and its automorphism group, 88.

Eifler, Larry. The approximation property for some function algebras. Preliminary report, 200.

Eisenfeld, Jerome. Quadratic eigenvalue problems, 176; Schwarzschild's criterion for the stability of a horizontally stratified atmosphere, 801.

Eke, B. G. A note on mini-gaps, 618.

Elcrat, A. R. and Artiaga, Lucio. A local existence theorem for quasi-linear elliptic partial differential equations, 1032.

Eldridge, K. E. On ring structures determined by groups, 534; Ring structures determined by groups. II, 775.

Ellentuck, Erik. Almost combinatorial functions, 650.

Elschlager, R. A. Multi-head finite automata and the word problem for free groups, 358.

Emch, G. G. See Herman, R. H.

Emerson, W. R. Groups defined by permutations of a single word. Preliminary report, 144.

Engelking, R. Selectors of the first class of Baire for semicontinuous set-valued functions, 369.

Ensey, R. J. Quotient categories and isomorphism invariants of abelian p-groups, 1012.

Entringer, R. C. See Tarwater, J. D.

Epstein, Bernard. A formal expansion procedure for a solitary wave problem, 363.

Erdelyi, Ivan. Partial isometries closed under multiplication on Hilbert spaces, 155; Partial isometries defined by a spectral property on unitary spaces, 731.

Etgen, G. J. On the matrix Sturm-Liouville equation, 79; A separation theorem for second order matrix systems, 751.

Etterbeek, Wallace. See Tamura, Takayuki.

Evans, B. D. See Kenelly, J. W.

Evans, Trevor. Finitely presented loops, lattices, etc. are hopfian, 360; Normal form theorems for free groups, free products and generalized free products, 1014.

Everett, C. J. Reaction kinetics in concentration space, 397; On Veblen-Wedderburn systems, 553.

Everett, C. J. and Metropolis, N. Symmetrizability of incidence matrices. Preliminary report, 559.

Everett, C. J. and Schrandt, R. G. A problem of Erdős on the sum of integer nth powers, 813.

Fadell, A. G. and Magill, K. D., Jr. Automorphisms of the semigroup of all polynomial functions over the reals, 200.

Falbo, C. E. Reducing the order of some nonlinear second order differential equations, 630.

Farkas, H. M. Weierstrass points and analytic submanifolds of Teichmueller space, 78.

Farley, R. W. Positive Clifford semigroups on the plane. Preliminary report, 1012.

Farmer, C. H. Pseudo-δ-mixing measure-preserving transformations on a probability space. Preliminary report, 213.

Farrar, Carolyn. A sufficiency condition for uniform continuity, 645.

Fearnley, Lawrence. Uniqueness and universal mapping of the pseudo-circle, 401; The pseudo-circle is not homogeneous, 942.

Feaux, C. J. Divisors in the Cayley ring, 761.

Feiner, Laurence. Models of the theory of equality not isomorphic to recursive ones, 399.

Feldman, Jacob. Random measures and continuous product measures, 795.

Feldman, L. A. Reducing bundles in G-spaces, 733.

Ferguson, Le Baron O. Uniform approximation by polynomials with integral coefficients. I, 82.

Fettis, H. E. Some new integral relations involving Bessel functions, 145.

Ficken, F. A. Generalized inverses which are left symmetrizers, 910.

Fieldhouse, D. J. Regular modules, 139; Pure simple and indecomposable rings, 376; Flat covers, 543.

Fillmore, J. P. Symmetries of surfaces of constant width, 155.

Fink, A. M. Almost periodic solutions to second order differential equations, 507.

Fink, A. M. and Seifert, G. A separation condition for the zero solution of a system of differential equations, 96.

Fink, J. P. Asymptotic estimates of Feyman integrals, 239.

Finkelstein, Raphael and London, Hymie. Fibonacci and Lucas cubes, 947.

Finney, R. L. Uniform limits of compact cell-like maps, 942.

Fischer, P. C. A multidimensional generalization of the firing squad problem, 554.

Fisher, J. L. A torsion theory for an Abelian category, 522.

Fitch, James. See Askey, Richard.

Fitting, M. C. Intuitionistic logic models with constant domains, 807.

Flaherty, F. J. Discs in negatively curved manifolds, 527.

Fleischer, Isidore. Correction to "Completeness in valued spaces and algebras", 633.

Fleischman, W. M. A new extension of countable compactness, 93.

Ford, C. E. Complements for cyclic, normal, self-centralizing subgroups, 1035.

Forelli, Frank. What makes a positive measure the total variation measure of an analytic measure ?, 194.

Fox, Martin and Kimeldorf, G. S. Values of noisy duels with not-necessarily equal accuracy functions, 380.

Frame, J. S. Character computation techniques for large simple groups, 1032.

Frank, Evelyn. Remarks on general continued fractions, 728.

Frankowski, Krzysztof. See Leavitt, Jay.

Fraser, R. B. Banach spaces of Lipschitz functions with different metrics on the underlying space, 168; A new metric for a metric space, 757.

Frayne, T. E. A basic theory of limits, 794.

Freedman, M. I. Estimates on the existence region for solutions of equations involving a small parameter, 140.

____. See Zames, George.

Friedberg, Michael. Congruences defined by continuous real-valued functions, 131.

Friedman, N. A. On entropy and mixing transformations, 629.

Friedman, N. A. and Ornstein, D. S. Partially mixing transformations, 946.

Friend, G. D. See Brace, J. W.

Froderberg, A. J. Closure in the algebra of rapidly increasing functions, 736.

Froemke, Jon. A relation between two kinds of independence in universal algebra. Preliminary report, 151.

Frost, Francis. Derivations and the action of functions on trace class. Preliminary report, 149.

Fuelberth, J. D. On commutative splittings rings, 616.

Fugate, J. B. Retracting dendroids onto trees, 773.

Fuhrmann, P. A. Maximal ideals in $OH^{\infty}(N)$, 658.

Fukushima, Mitsuo. See Merkel, R. B.

Fuller, K. R. The structure of QF-3 rings, 146.

Fulp, R. O. See Griffith, P. A.

Fulp, R. O. and Griffith, P. A. Extensions of locally compact abelian groups. II, 1010.

Fulton, J. D. Symmetric, involutory matrices mod p^m, 1021.

Fulton, J. D. and Morris, W. L. The Pisano period, Fibonacci frequency and Leonard logarithm of the positive integers, 82.

Gabbay, Dov. Ultraproducts of Kripke's models of intuitionistic logic. Preliminary report, 932; Applications of Kripke semantics to intermediate logics. Preliminary report, 1044.

Gaer, M. C. and Rubel, L. A. The fractional derivative and entire functions, 1037.

Gaifman, Haim. Two results concerning extensions of models of set theory, 947.

Gale, David, Klee, Victor and Rockafellar, R. T. Convex functions on convex polytopes, 213.

Galvin, Fred. A generalization of Ramsey's theorem, 548; Partition theorems for the real line, 660.

Ghandhi, J. M. Generalization of some partition function, 240; Some group laws equivalent to the commutative law, 349, 949; Regular primes and the diophantine equations $x^l + y^l = cz^l$ .I., 744; On the diophantine equation $x^l + y^l = cz^l$. II, 787.

Ganea, Tudor. Cotriples and Lusternik-Schnirelmann category, 939.

Gardner, B. On contraction mappings, 547.

_____. See Singh, K. L.

Garfunkel, Solomon. On the undecidability of certain classes of abelian groups with an extra unary predicate, 632.

Gasper, George, Jr. On a function of Littlewood-Paley and Zygmund, 225.

Gaudry, G. I. H^p multipliers and inequalities of Hardy and Littlewood, 372; Changes of signs of restrictions of Fourier-Stieltjes transforms, 632.

Gauntt, R. J. Some restricted versions of the axiom of choice. Preliminary report, 351.

Gauthier, P. M. A form of Plessner's theorem and an identity theorem. Preliminary report, 234; Asymptotic behavior and p-arcs. Preliminary report, 380; Some identity theorems for meromorphic functions, 560; Unbounded holomorphic functions bounded on a spiral, 660.

Geiser, J. R. Nonstandard analysis, 1045; A result on limit ultrapowers, 931.

Gelbaum, B. P. Fibre bundles and tensor products, 207.

Gellar, R. A. Weighted shifts. I. Simple invariant subspaces, 397.

Geller, D. P. Square roots of digraphs, 214.

_____. See Chartrand, Gary.

Gentry, I. C. See Brauer, A. T.

George, J. H. See Gunderson, R. W.

Gerhard, J. A. The lattice of equational classes of idempotent semigroups, 553.

Gershuni, Baruch. Singular classes and sets, 389; Linear axiom-systems, 629; On the concept of "function", 807; The three kinds of totalities, 933.

Gerstein, L. J. Splitting quadratic forms over Hasse domains, 506.

Gersting, Judith. Universal regressive isols and a theorem of T. G. McLaughlin. Preliminary report, 803.

Gevirtz, Julian. Metric conditions that imply local invertibility. Preliminary report, 198.

Giambalvo, V. W. The Z_p-cohomology of $BO\langle 4k,\ldots,\infty\rangle$, 365.

Gibbs, A. G. See Nestell, M. K.

Gibson, P. M. An identity between the permanent and the determinant, 1009.

Gilbert, R. C. Symmetric operators with singular spectral functions, 632.

Gillette, R. M. On representations of braid groups and mapping class groups, 773.

Gillette, R. M. and Van Buskirk, J. M. Monotone n-frames are tame, 755.

Gilmer, Robert. The unique primary decomposition theorem in commutative rings without identity, 129; On the number of generators of an invertible ideal, 783; Commutative rings in which each prime ideal is principal, 915; Some results on Rees rings. Preliminary report, 1011.

Gilmer, R. W. and Mott, J. L. Some results on contracted ideals, 1019.

Give'on, Y. See Arbib, M. A.

Give'on, Y. and Arbib, M. A. Algebra automata. II: The categorical framework for dynamic analysis, 544.

Glasner, Moses. Classifications with respect to elliptic equation on a Riemannian manifold, 751.

Glasner, Moses and Katz, R. On the Royden compactification for Riemannian manifolds, 635.

Glazer, G. S. Geometry of p-adic numbers, 719.

Gleit, Alan. See Effros, E. G.

Glickfeld, B. W. On an inequality in Banach algebra geometry and semi-inner product spaces, 339.

Goes, Gunther. Matrix transformations between FK-spaces and sequences of Fourier coefficients, 157.

Goes, Sigrun. About compactness in Kothe spaces, 161.

Goffman, Casper. Differentiation and surface area, 1037.

Goldberg, Michael. Two more tetrahedra equivalent to cubes by dissection, 742.

Goldfarb, Donald. Analogs of Newton's method for quadratic programming, 400.

Goldschmidt, D. M. Weakly closed subgroups of the Sylow center. Preliminary report, 786.

Goldstein, Charles. Eigenfunction expansions and scattering theory for certain infinite domains, 158.

Gollwitzer, H. E. Stokes multipliers of subdominant solutions of the differential equation $y'' - (x^m + a_1x^{m-1} + \ldots + a_{m-1}x + \lambda)y = 0$, 88; On the existence of positive eigenfunctions for a nonlinear boundary-value problem, 728; Oscillation theorems for a delay equation, 927.

Gonshor, Harry. Properties of the category of commutative C* algebras, 720.

Goodman, A. W., Rahman, O. I. and Ratti, J. S. On the zeros of a polynomial and its derivatives. Preliminary report, 141.

Goodman, R. E. A note on polynomials whose critical points lie in a given circle, 732.

Goodwyn, L. W. A characterization of symbolic flows. Preliminary report, 190.

Gopal, M. R. A note on functions of bounded boundary rotation, 524.

Gordon, Basil and Houten, Lorne. Asymptotic formulae for multirowed partitions, 133; Asympotic results in plane partitions, 611.

Gordon, W. J. Bivariate interpolation through curve networks, 211; Cardinal expansions of bivariate and multivariate functions, 533; Cardinal expansions of bivariate functions, 629.

Gorman, Howard. Invertibility of modules over Prüffer rings. Preliminary report, 507.

Graham, G. A. C. The solution of mixed boundary value problems that involve time-dependent boundary regions for isotropic and homogeneous viscoelastic materials with one relaxation function, 219.

Graham, R. L. See Berlekamp, E. R.

Granirer, E. E. Functional analytic properties of extremely amenable semigroups, 206.

Granirer, E. E. and Lau, Anthony. A characterization of locally compact amenable groups, 926.

Grätzer, G. A. See Chen, C. C.

Grätzer, G. A. and Lakser, H. Equationally compact semilattices, 196; Extension theorems on congruences of partial lattices. II, 732; Extension theorems on congruences of partial lattices. I, 785.

Grätzer, G. A., Lakser, H. and Platt, C. R. Free products of lattices, 375.

Grätzer, G. A. and Lampe, W. A. Representations of some transformation semigroups as endomorphism semigroups of universal algebras. II, 625, 818.

Graves, W. H. On the divisibility of the group of divisor classes of degree zero, 186.

Gray, N. R. On a problem of Borsuk. Preliminary report, 617.

Greechie, R. J. Orthomodular lattices admitting no states, 539.

Green, Charles. A decomposition property for semilattices. Preliminary report, 1040.

Green, M. D. A locally convex topology on a preordered space, 113.

Greenlee, W. M. Singular perturbation of eigenvalues. Preliminary report, 508.

Greenspan, Donald. Numerical solution of initial-boundary value problems for mildly nonlinear parabolic and hyperbolic equations, 84; Numerical solution of steady state Navier-Stokes problems for all Reynolds numbers, 199.

Greenwood, P. E. An asymptotic estimate of Brownian path variation, 751.

Greibach, S. A. Checking automata and one-way stack languages. Preliminary report, 636.

_____. See Book, R. V.

Greville, T. N. E. Spectral generalized inverses of singular square matrices, 111.

Griffith, P. A. On generalized Baer groups, 153.

_____. See Fulp, R. O.

Griffith, P. A. and Fulp, R. O. Extensions of locally compact abelian groups, 755.

Grillet, P. A. The structure of finite semigroups, 384.

Groetsch, C. W. See Outlaw, C. L.

Groh, H. J. A characterization of the real miquelian Laguerre plane, 116.

Gross, Fletcher. See Scott, W. R.

Gross, J. L. A unique decomposition theorem for 3-manifolds with connected boundary, 175.

Gross, Leonard. Classical analysis over a Hilbert space, 334.

Grove, L. C. and Lardy, L. S. A finiteness condition for abelian groups, 758.

Grunbaum, Branko. Higher-dimensional analogues of the four color problem, 180.

Gruttke, W. B. Fifth order pseudo-Runge-Kutta methods, 755.

Gudder, S. P. A note on proposition observables, 88; Elementary length topologies in physics, 730.

Guenther, R. B. and Roetman, E. L. Interpolation in n-dimensions, 90.

Guggenheimer, H. W. The analytic geometry of the unsymmetric Minkowski plane. III. Circles of curvature, 359.

Guilinger, W. H. and Kellogg, R. B. Elliptic difference equations on a convex domain, 87.

Guillot, E. See Sarafyan, D.

Gundersen, R. M. One-dimensional magnetohydrodynamic flow and the Monge-Ampere equation, 91.

Gunderson, R. W. and George, J. H. On the equivalence of certain stability propertites, 94.

Gupta, C. K. On 2-metabelian groups. Preliminary report, 233.

Gupta, N. D. Commutation near-rings of a group. Preliminary report, 229; On two theorems of J. M. Gandhi, 637.

Gupta, P. R. See Arora, K. L.

Gupta, R. N. and Saha, F. On quasi-Fröbenius local rings, 232.

Gupta, R. P. Independence and covering numbers of line graphs and total graphs, 354; Bounds on the chromatic and achromatic numbers of complimentary graphs, 541.

Gurel, Okan. Stability of the pair (X,f), 774.

Guseman, L. F., Lacey, H. E. and Morris, P. D. Linear isometries on spaces of affine continuous functions, 151.

Gustafson, K. E. Multiplicative perturbation of semigroups, 509; A min-max theorem, 799.

Gustafson, K. E. and Weidmann, Joachim. On the essential spectrum, 795.

Guy, R. A. A class of nonlinear forms on certain modules, 214.

Guy, R. K. See Conway, J. H.

Guy, R. K. and Kelly, P. A. The no-three-in-line problem, 550.

Ha, Kwang Chul. On the self dual locally compact Abelian groups with compact radical, 536.

Haber, Seymour. Randomized quatrature formulas, 97.

Hahn, K. T. and Mitchell, Josephine. Green's functions on the classical Cartan domains. I, 142.

Haimo, D. T. See Cholewinski, F. M.

Haimo, D. T. and Chowlewinski, F. M. Inversion and representation for the Weierstrass Laguerre transform, 402.

Hajian, Arshag and Ito, Juyi. Weakly wandering sets and invariant measures for a group of transformations, 925.

Hales, R. S. On the independence number of product circuit graphs, 722.

Halkin, Hubert. See Hendricks, E. C.

Hall, C. A. and Porsching, T. A. A separation theorem for nonsymmetric matrices, 84; On a theorem of A. Brauer, 218.

Hall, William. See Kraut, Edgar.

Hallstrom, A. P. Bounded point derivations and analytic capacity. Preliminary report, 642; Bounded point derivations on A(X). Preliminary report, 792.

Hammer, P. C. and Williams, C. M. Connected sets from higher order relations, 747.

Hamstrom, M. E. and Jerrard, R. P. Collapsing a triangulation of a "knotted" cell, 368.

Hansen, R. T. Complementing pairs of subsets of the plane, 618.

Harary, Frank and Palmer, E. M. On acyclic simplicial complexes, 87; On the point-group and line-group of a graph, 108.

Hardman, N. R. See Jordan, J. H.

Hardy, J. T. On the representability of quaternary quadratic forms as sums of squares of two linear forms, 516.

Hardy, J. W. and Lacey, H. E. On the existence of Silov boundaries, 647.

Harley, P. W. On suspending homotopy spheres, 79.

Harris, J. D. Completion of a space with respect to a class of spaces. Preliminary report, 561.

Harris, J. H. New definitions of ordinal (class), 754; On the richness of subtheories of ZF + GCH, 904.

Harris, W. A., Jr., Sibuya, Y. and Weinberg, L. A reduction algorithm for linear differential systems, 524.

Harrow, Martin. Further results for the solutions of certain third order differential equations, 378.

Hart, Neil. Quasi-isomorphism invariants for totally projective groups, 400.

Harte, R. E. Tensor products of normed modules, 197.

Hastings, S. P. Backward existence for retarded functional differential equations, 192.

Hayes, D. R. Character sums over finite fields, 738.

Hayes, S. E. A theorem on Stieltjes integrals, 922.

Haynsworth, E. V. The Perron property, 745; Bounds for the maximum and minimum eigenvalues of an Hermitian matrix, 1022.

Hays, John. Introduction to hyperboolean systems. III: Finite and transfinite fields; vector spaces and their duals, 201; Introduction to hyperboolean systems. IV: Generative hyperbooleans; polynomials and rational forms; density and incompleteness, 948.

Head, T. J. Tensoring with a semigroup, 188.

Heard, E. A. See Wells, J. H.

Hearsey, B. V. Regularity for convergence structures, 618.

Heatherly, H. E. See Malone, J. J.

Hebert, D. J. and Lacey, H. E. On supports of regular Borel measures, 197.

Hedetniemi, S. T. On partitioning planar graphs, 182; An isomorphism theorem in graph theory involving double cosets. Preliminary report, 1048.

Hedstrom, G. W. The rate of convergence of parabolic difference schemes, 184.

Heerema, Nickolas. A group of a Lie algebra, 94; Commutators and the ramification series of valuation rings, 1013.

Heidel, J. W. Existence of oscillatory solutions for a nonlinear odd order differential equation, 148; A nonoscillation theorem for a nonlinear second order differential equation, 1014.

Heinzer, Martin. Strongly convergent derivation automorphisms of a class of wildly ramified v-rings, 1014.

Heinzer, W. J. On Krull overrings of a Noetherian domain, 914; A note on rings with noetherian maximal spectrum, 1012.

_____. See Eakin, Paul.

Heinzer, W. J. and Ohm, J. F. Some remarks on explicit overrings, 912.

Hemminger, R. L. On reconstructing a graph, 121.

Hemmingsen, Erik and Reddy, W. L. Expansive homeomorphisms on manifolds and homogeneous spaces, 160.

Henderson, G. W. Separation by manifold-like sets, 381.

Hendricks, E. C. and Halkin, Hubert. Subintegrals of set-valued functions with semi-analytic graphs, 393.

Henney, Dagmar. Representation of set-valued additive functions defined on base-cone in Banach spaces, 720.

Henry, M. S. and Stein, F. M. A best approximate solution of the Riccati matrix equation, 520.

Herman, R. H. and Emch, G. G. A generalization of Hugenholtz's theorem of types, 219.

Herrlich, H. and Strecker, G. E. H-closed spaces and reflective subcategories, 98.

Herzog, Marcel. On finite groups with a cyclic Sylow subgroup, 613.

Hethcote, H. W. Asymptotic approximations with error bounds for zeros of Airy and Bessel functions, 755.

Heuer, G. A. Pointwise approximation by s.c. functions, 228.

Hewitt, Edwin and Ross, K. A. A maximal problem in harmonic analysis. III, 139.

Heyn, Hans. See Bogdanowicz, Witold.

Heywood, J. G. On nonstationary problems for the Navier-Stokes equations, and the stability of stationary flows, 399.

Higbie, L. C. When best rational Chebyshev approximations are polynomials, 642.

Higman, Graham and McKay, James. Construction on Janko's group of order 50, 232, 960, 1036.

Hill, Paul. Endormorphism rings generated by units, 1016.

Hill, Paul and Megibben, Charles. On certain classes of primary abelian groups, 105.

Hill, R. D. Inertia theory for simultaneously triangulable complex matrices, 150, 818.

Himmelberg, C. J. and Van Vleck, F. S. Some selection theorems for measurable functions, 96.

Hindman, Neil. On the existence of c-points in $\beta N \setminus N$. Preliminary report, 810.

Hinman, P. G. Hierarchies of effective descriptive set theory, 377.

Hinton, D. B. Asymptotic behavior of zeros of solutions of second-order differential equations, 1016.

Hobbs, B. F. Homomorphism topologies and slender groups, 518.

Hobby, C. R. See Cheney, E. W.

Hodel, R. E. Sum theorems for topological spaces, 80.

Hodgson, J. P. E. Automorphisms of metastably connected manifolds, 512.

Hoffman, Frederick. Affinely variant sets in vector spaces over GF(2), 173.

Hofler, J. T. Schauder basis cones and continuity of the lattice operations in barreled spaces, 1015.

Hofsommer, D. J. A solution of the matrix equation AX - XB = C, 775.

Hollister, H. A. Strongly generalized periodic elements in a group, 85.

Holmes, R. B. Smoothness and roughness indices defined by convex functions, 925.

Horelick, Brindell. Group-like extensions and similar algebras, 143.

Horm, Alfred. A property of free Boolean algebras, 375.

_____. See Balbes, Raymond.

Horn, R. A. The theory of infinitely divisible matrices and kernels, 173.

Horne, J. G. Can multiplication on Sl(2) be extended?, 228.

Horner, D. R. p-strictly singular operators, 615.

_____. See Buck, W. L.

Horvath, John. The analytic continuation of vector-valued holomorphic functions, 176.

Hou, P. H. Quasi-splitting exact sequences, 772.

Houten, Lorne. See Gordon, Basil..

Howell, W. E. See Layman, J. W.

Howes, Norm. A theorem on partially ordered sets and a new theory of convergence, 346.

Howland, J. S. The essential spectrum of Schroedinger operators with singular potentials, 381.

Howland, R. A. Lie isomorphisms of derived rings of simple rings. Preliminary report, 723.

Huff, B. W. The loose subordination of differential processes to Brownian motion, 653.

Humphreys, J. E. A fusion theorem for semisimple groups. Preliminary report, 178.

Huneke, J. P. Mountain climbing, 630.

Huneycutt, J. E., Jr. Regular additive set functions. Preliminary report, 169.

Hungerford, T. W. On the free product of algebras, 93; On the associativity of certain derived functors, 758.

Hunt, R. A. and Taibleson, M. H. On the almost everywhere convergence of Fourier series on the ring of integers in a local field. Preliminary report, 550.

Hurley, J. F. Scalar replacement in Lie algebras, 114.

Husain, S. A. On uniform covergence factors of orthonormal expansions, 341.

Husch, L. S. Unknotting of tori and the triangulability of manifolds, 771; Desuspending collapses, 1009.

Hutchinson, John. Strongly intrinsic extensions of left quotient semisimple rings, 199, 818.

Hyman, M. A. Partial differential equations with singular coefficients. Revisited, 774; Image coding, 927.

Innis, G. S. Analysis of sampled data sets, 726.

Isles, D. F. A transfinite extension of Bachmann's sequence of normal functions. II, 390.

Ito, Juyi. See Hajian, Arshag.

Itzkowitz, G. L. The existence of homomorphisms in compact connected Abelian groups, 140.

Jaco, William. Constructing three-manifolds from group homomorphism, 533.

Jaco, William and McMillan, D. R., Jr. Retracting 3-manifolds onto finite graphs, 554.

Jain, M. K. On certain integral operational formulae. II, 776.

Jain, S. K., Mohamed, S. H. and Singh, Surgeet. Rings in which each right ideal is quasi-injective, 784.

James, D. G. A Witt theorem for indefinite unimodular quadratic forms, 237.

Janos, Ludvik. On "Lipschitz structures", structures which are relevant to the concept of contractivity, 135; On self-maps which have a unique fixed point, 201; Topological homotheties on compact Hausdorff spaces, 347; On groups of isometries, 531; A converse of the generalized Banach's contraction theorem, 544; On equivalent families of pseudometrics, 623; A generalization of the concept of a Clifford semigroup, 809.

Janowitz, M. F. Weak*-equivalence in Baer*-semigroups. Preliminary report, 770.

Jategaonkar, A. V. Structure of left principal ideal rings, 217.

Jean, Michel. Pure systems of binary relations. II, 350.

Jenkins, J. W. An amenable discrete group with a nonsymmetric group algebra, 922.

Jensen, B. A. Infinite inverse semigroups that are homomorphically finite, 136.

Jensen, R. B. Nonconstructible patterns of degrees, 189; Souslin's hypothesis is incompatible with V = L, 935.

Jerome, J. W. and Schumaker, L. L. A characterization of functions with higher order derivatives in $\mathcal{L}_p$, 779.

Jerrard, R. P. See Hamstrom, M. E.

Jockusch, C. G., Jr. Degrees of h.h.i. sets, 935.

Johnsen, E. C., Outcalt, D. L. and Yaqub, A. M. Commutativity theorems for nonassociative rings with a finite division ring homomorphic image, 741.

Johnson, G. G. Continuous commuting functions, 236.

Johnson, H. H. Determination of hyperbolicity by partial prolongations, 367.

Johnson, J. S. Nonfinitizability of classes of Boolean algebras with operators, 383.

Johnson, R. A. Some types of Borel measures, 735.

Johnson, W. B. Generalizations of a Paley-Wiener theorem, 516; Finite-dimensional Schauder decompositions in certain Banach spaces, 793.

_____. See Dyer, J. A.

Johnson, W. B. and Shive, R. A., Jr. A reducing map theorem, 516.

Jones, O. T. Continuity of linear maps and seminorms on a space with Schauder basis, 368.

Jones, R. C. and Karlovitz, L. A. Oscillation theorems for nonunique best approximations in the supremum norm, 746.

Jones, Ralph. Countable dimension and dimensional core, 726.

Jordan, J. H. The distribution of kth power residues and nonresidues in the Gaussian integers, 133, Consecutive residues and nonresidues in the Gaussian integers, 738.

Jordan, J. H. and Hardman, N. R. The distribution of quadratic residues in fields of order p^2, 614.

Jordan, J. H. and Kelley, S. J. Distribution of quartic and quintic nonresidues, 79.

Kac, Mark. Integration in function spaces and some problems in statistical mechanics, 334.

Kachroo, R. C. On the strong summability of Fourier series, 371.

Kahn, H. D. Covering semigroups. II, 208.

Kalman, P. J. The existence of a globally differentiable demand function, 928; A solution to a system of partial differential equations, 1043.

Kalmbach, Gudrun. Some remarks on noncompact manifolds, 161.

Kamthan, P. K. Growth of Nevanlinna's characteristic function for various mermorphic functions, 537.

Kannappan, Pl. On the sine functional equation, 774.

Kantorovitz, Shmuel. The C^k-classification of certain operators in L_p, 630; The C^k-classification of certain operators in L_p. II, 743.

Kapoor, S. F. Expanding n-stars, 112.

____. See Chartrand, G.

Kappe, W. P. and Konvisser, M. W. Self-centralizing elements in finite p-groups. Preliminary report, 232.

Karlovitz, L. A. See Jones, R. C.

Kartsatos, A. G. Existence of bounded monotone solutions of nth-order differential equations, 920.

Kascic, M. J. Polynomials in closed linear relations, 147.

Katz, I. J. and Baskett, T. S. On products of EPr matrices and EPr products of matrices, 367.

Katz, R. See Glasner, Moses.

Kaul, S. K. On a transformation group, 349.

Kayande, A. A. and Lakshmikantham, V. General dynamical systems and differential inequalities, 392.

Kayande, A. A. and Rao, M. R. M. Differential inequalities and stability with respect to manifolds, 356; Comparison principle and converse theorems for finite time stability, 724.

Keesling, J. E. Open mappings and closed zero-dimensional sets, 115.

Kegel, O. H. A characterization of Borel and Cartan subalgebras of finite-dimensional Lie algebras, 141.

Keisler, H. J. On the quantifier "There exist uncountably many", 654.

Keller, Gordon. A characterization of A_6 and M_{11}, 395.

Kellett, J. M. A torsion theory for modules over rings without identities, 910.

Kelley, S. J. See Jordan, J. H.

Kelly, D. G. General Griffiths inequalities on correlations in Ising ferromagnets, 81.

Kellogg, R. B. See Guilinger, W. H.

Kelly, P. A. See Guy, R. K.

Kelman, R. B. The field near a probe, 343.

Kenelly, J. W. and Evans, B. D. An upper bound on the dimension of the convex kernel, 132.

Kent, D. C. A representation theorem for uniform convergence structures, 617; Convergence quotient maps, 739.

Keogh, F. R. and Merkes, E. P. A coefficient inequality for certain classes of analytic functions, 112.

Keown, E. R. Biorthogonal systems in l^p-spaces, 719.

Kerr, D. R., Jr. Seminorm-dual subspaces of the algebraic dual of a linear space, 91.

Kesarwani, R. N. Fractional integration and certain dual integral equations, 221.

Keston, R. See Bruckner, A. M.

Keynes, H. B. and Robertson, J. B. Ergodicity and mixing in topological transformation groups, 204; Generators for topological entropy and expansiveness, 505.

Khuri, A. I. Application of Papkovitch functions to three-dimensional thermoelastic problems, 1013.

Kibler, R. E. Axiomatic equivalence in Baer*-rings, 782.

Kiefer, Jack. The deviation in Skorokhod-Strassen approximation, 936.

Killgrove, R. B. The k-configuration. Preliminary report, 85; Point set geometries, 344; Graphs of quadratics in projective planes, 1024.

Kim, Y.-W. Pairwise compact open topology, 366.

Kimber, J. E., Jr. Generalizations of Hu's boundedness and of the Tychonoff theorem, 722.

Kimbleton, S. R. A converse of a random stable limit theorem, 122; A random limit theorem and distributions of class L. Preliminary report, 816.

Kimeldorf, G. S. See Fox, Martin.

King, J. P. Almost convergent positive linear operators, 160.

Kirby, R. C. Stable homeomorphisms, 1046.

Kirch, M. R. On a class of extremally disconnected spaces. Preliminary report, 107.

Kirk, W. A. On a nonlinear functional equation in a Banach space, 922.

Kirwan, W. E. See Brannan, D. A.

Kishore, Nand. Representation of a set as the union of two disjoint nonmeasurable sets, 151.

Kist, J. E. and Maserick, P. H. Functions of bounded variation on a commutative idempotent semigroup, 86.

Kitchen, J. W. Almost periodic measures on a compact Abelian group, 139.

Klarner, D. A. The number of graded partially ordered sets, 153.

Klasi, Melvin. See Wright, F. M.

Klee, Victor. Two renorming constructions related to a question of Anselone, 907.

_____. See Gale, David.

Klein, Melvyn. Meromorphic starlike multivalent functions, 391.

Kleitman, D. J. See Krieger, M. M.

Koehler, J. E. Folding a strip of stamps, 240.

Koethe, G. M. Mappings of (F)-spaces into (LF)-spaces, 349.

Koh, E. L. and Zemanian, A. H. The complex Hankel and I-transformations of generalized functions, 102.

Koh, Kwangil. On a structure theory of a projective generator for an exact category with unions, 99; On prime right ideals in a semiprime ring, 1009.

Kohlmayr, G. F. On the exponential moment transform and a discrete Banach algebra theory of integro-differential equations, 398, 949; A numerical operational calculus related to the one-sided Laplace transformation, 772.

Konvisser, M. W. See Kappe, W. P.

Korevaar, Jacob. Approximation by potentials of families of unit masses on disjoint rectifiable curves, 1031.

Korevaar, Jacob and Chui, C. K. Approximation by potentials of families of unit masses on disjoint analytic curves, 1031.

Körle, H.-H. On the equivalence of Riesz and generalized Cesàro (absolute) summability, 923; On the equivalence of Riesz and generalized Cesàro (absolute) summability. II, 1041.

Kortanek, K. O. See Ben-Israel, Adi.

Kostinsky, Alan and McKenzie, Ralph. Cardinality problems for rings. Preliminary report, 389.

Kozlowski, George. A generalization of a theorem of Smale, 560.

Kraft, Richard. An unusual mixed initial boundary problem, 379.

Kraines, D. P. Primitive chains and $H_*(\Omega X)$, 154.

Krause, E. F. and Weston, K. W. On the Lie algebra of a Burnside group of prime exponent, 337.

Krause, G. R. A class of modules over a left-noetherian ring, 621.

Kraut, Edgar, Busenberg, Stavros and Hall, William. On an additive decomposition of functions of several complex variables, 202.

Kreith, Kurt. Lower bounds for the essential spectrum of fourth order differential operators, 613.

Kreyszig, Erwin. Minimal exponential operators, 195.

Krieger, M. M. An inequality for higher Ramsey numbers, 1035.

Krieger, M. M., Kleitman, D. J. and Rothschild, B. L. Configurations maximizing the number of pairs of Hamming adjacent lattice points. Preliminary report, 344.

Krishna, J. G. Maximum term of a power series in one and several variables, 160; On some Wiman-type theorems in several complex variables, 775.

Krishna, J. G. and Shah, S. M. Entire functions of bounded index in several complex variables, 152.

Kronk, H. V. On graphs with prescribed connectivities, 625.

_____. See Chartrand, Gary.

Krzywoblocki, M. Z. v. Mathematical aspects of the recent developments in the theory of relativity, 1030.

Kuipers, L. Uniform distribution in Galois fields, 120.

Kulshrestha, P. K. Steady Couette flow in a centrifuge, 128; Nearly-sinusoidal oscillations of a dusty gas, 769.

Kurtz, L. C. On uniform convergence and positive operators, 147.

Kurtz, L. C. and Tucker, D. H. An extended form of the mean-ergodic theorem, 521.

Kyrala, Ali. A generalization of the Gaussian distribution, 937.

Kyrala, Ali and Kyrala, J. W. Quantum differential equations from Markov chains, 943.

Kyrala, J. W. See Kyrala, Ali.

Kyrouz, T. J. On the homotopy theory of sphere bundles, 167.

Lacey, H. E. See Guseman, L. F.

_____. See Hardy, J. W.

_____. See Hebert, D. J.

Lachlan, A. H. Computable fields and arithmetically definable ordered fields, 646.

Lakein, R. B. A generalization of the Gauss bound for a certain class of biquadratic number fields, 168.

Lakser, H. Canonical representations in free products of lattices, 383; Free lattices generated by a partially ordered set. I, 544; Free lattices generated by a partially ordered set. II, 623, 949.

____. See Grätzer, G. A.

Lakshmikantham, V. See Kayande, A. A.

Lakshmikantham, V. and Leela, S. A new differential inequality useful in control systems, 166.

Lakshmikantham, V. and Tsokos, C. P. Application of the topological principle of Wazewski to control systems, 177.

Lal, Nand. See Merrill, Samuel, III.

Lalli, B. S. On a periodic solution of a Hamiltonian system, 217, 818.

Lam, P. F. Expansive homeomorphisms on sigma-compact uniform spaces, 938; Homomorphisms of expansive dynamical systems, 1045.

Lam, T. Y. and Reiner, Irving. Relative Grothendieck groups, 647; Reduction theorems for relative Grothendieck rings, 916.

Lambert, W. M., Jr. An extension of Heisler's characterization of finite fields. Preliminary report, 1025.

Lampe, W. A. Two remarks on unary algebras, 165; On the interdependence of structures associated with a universal algebra. Part I. Preliminary report, 546; Representations of some transformation semigroups as endomorphism semigroups of universal algebras. I 625, 949; On the interdependence of structures associated with a universal algebra. II. Preliminary report, 752; A lemma for the congruence lattice characterization theorem, 783.

____. See Grätzer, G. A.

Lanski, Charles. Nil subrings of Goldie rings are nilpotent, 513.

Lardy, L. S. See Grove, L. C.

LaTorre, D. R. An internal characterization of the 0-radical of a semigroup, 1020.

Lau, A. T. N-extremely amenable semigroups, 1043.

____. See Granirer, E. E.

Laver, Richard. Fraissé's conjecture, 934.

Lawson, J. D. Homomorphisms of topological semilattices, 112.

Lawyer, D. A. Left ideal axioms for nonassociative rings, 83.

Layman, J. W. and Howell, W. E. Infinite exponential interpolation. II: Convergence, 1042.

Layman, J. W. and Pitts, G. G. Infinite exponential interpolation. Preliminary report, 633.

Lazar, A., Wulbert, D. E. and Morris, P. D. Continuous selections for metric projections, 365.

Lazer, A. C. and Anderson, L. R. On the asymptotic behavior of a class of linear differential equations, 657.

Le Tourneau, J. J. Second-order decision results, 815.

Leach, D. E. A uniqueness theorem, 397; On a class of second-order differential systems with bounded coupling terms, 641.

Leavitt, Jay and Frankowski, Krzysztof. Remarks on mixed Taylor-L_2 approximations, 170.

Lee, R. Y. Turning point problems for almost diagonal systems, 356; Reduction of order for a system of differential equation at a turning point. Preliminary report, 619.

Lee, Y.-L. On the construction of upper radical properties, 386.

Leela, S. See Lakshmikantham, V.

Lees, J. A. An engulfing theorem for topological manifolds, 224; A sufficient condition for the triangulation of manifolds. Preliminary report, 655.

Lehmer, D. H. and Lehmer, Emma. The cyclotomy of hyper-Kloosterman sums, 340.

Lehmer, Emma. See Lehmer, D. H.

Lehner, J. See Atkin, A. O. L.

Lehto, O. E. Existence theorem for a generalized Beltrami equation, 540.

Leinbach, L. C. Order properties in Banach algebras, 364.

Leininger, C. W. Concerning the inclusion problem for a generalized Hausdorff mean, 521; Concerning some proposals for quantum logic, 933.

Lemire, F. W. Weight spaces and irreducible representations, 744.

Lenihan, W. J. The construction of elementarily equivalent relational systems, 805.

Leonard, J. L. Generalized derivatives and monotonicity, 135.

Lepson, Benjamin. On entire functions of exponential type, their derivatives, and entire functions of bounded index, 764.

Lerman, Manuel. Turing degrees and many-one degrees of maximal sets, 722; Some finite nondistributive lattices and the degrees of unsolvability. Preliminary report, 804; Some finite nondistributive lattices and the degrees of unsolvability. II, 933.

Leroux, Pierre. Une caractérisation de la catégorie des groupes, 655.

Levin, M. D. See Saxon, S. A.

Levin, R. G. Some results on nonpotent, locally cyclic semigroups. Preliminary report, 123.

Levit, R. J. Irreducibility of polynomials with low absolute values, 367.

Levitt, Norman. Transversality for spherical fibrations. Preliminary report, 650.

Levitz, Hilbert. On the Finsler and Doner-Tarski arithmetical hierarchies. Preliminary report, 628.

Levow, R. B. On permanents of v-k-λ configurations, 903.

Lewis, P. W. Concerning the extensions of certain set functions, 517.

Lewis, R. M. and Ahluwalia, D. S. Uniform theory of diffraction of progressing waves, 126.

Lick, D. R. On I-series, 106.

_____. See Chartrand, G.

Lick, D. W. Existence-uniqueness theorems for nonlinear Dirichlet problems, 95.

Lickorish, W. B. R. and Martin, J. M. Collapsible triangulations of the 3-cell with knotted spanning 1-simplexes, 517.

Lieberstein, H. M. Viscous flow properties in the operation of a nephron, 612.

Lin, S.-C. Wave operators and similarity for some operators in Banach spaces, 139; On a smoothness of gentle perturbations, 1027.

Lindahl, R. J. and Moyer, R. D. A differential operator with no smooth functions in its domain, 86.

Lindquist, N. F. Approximation of convex bodies by finite sums of line segments. Preliminary report, 138.

Linnstaedter, L. On a multistage calculus of variations problem, 777.

Lipner, L. D. Generalized quantifiers and the theory of ordinals, 806.

Lipschutz, Seymour. Powers in generalized free products, 106.

Liu, Pei. Some properties of dependence space, 198.

Livingston, A. E. The coefficients of multivalent close-to-convex functions, 797.

Lloyd, S. P. On the L_2 space of a Banach limit, 122; Choquet boundary of left almost convergent functions, 721.

Loeb, H. L. See Barrar, R. B.

Loeb, H. L. and Moursund, D. G. Rational approximation with interpolation. Preliminary report, 379.

Loeb, P. A. A criterion for the proportionality of potentials with polar point support, 170.

Loeb, P. A. and Walsh, B. A maximal regular boundary for solutions of elliptic differential equations, 527.

Lomonaco, S. J. See Andrews, J. J.

Loncar, Ivan and Mardesic, Sibe. A note on inverse sequences of ANR's, 191.

London, Hymie. See Finkelstein, Raphael.

Long, C. T. Decimal expansions to negative bases, 614.

Lotkin, Mark. Differentiation of functions of observational data, 178.

Loveland, L. D. Piercing locally spherical spheres with tame arcs, 81; Tameness implied by extensions of homeomorphisms, 778.

Lu, Y. C. On holomorphic mappings of complex manifolds, 124.

Lucas, W. F. Games without symmetric solutions, 745.

Luh, Jiang. Primitive Γ-rings having minimal one-sided ideals, 385.

_____. See Coppage, W. E.

Lusk, E. L. See Dancis, Jerome.

Lustfield, C. D. Mass functions of bounded variation and starlikeness, 526.

Lyndon, R. C. and Ullman, J. L. Free groups of real two-by-two matrices, 222.

Mac Lean, D. W. A C^∞-engulfing theorem, 802.

Mack, J. E. Countable paracompactness and closed mappings, 770.

Magill, K. D., Jr. See Fadell, A. G.

Mahavier, W. S. Arcs in inverse limits on $[0,1]$ with only one bonding map, 211; Atomic mappings on irreducible Hausdorff continua, 1015.

Maher, W. F. The Lanczos spinor and the Bel-Petrov classification, 1008.

Makkai, Miha'ly. Preservation theorems for infinitary logic, 196; Model theoretic results on infinitary sentences, 639; A generalization of the interpolation theorem, 804.

Mallory, D. J. and Sion, M. Limits of inverse systems of measure spaces, 386.

Malone, J. J., Jr. A near-ring embedding problem, 130.

Malone, J. J., Jr., and Heatherly, H. E. Embedding near-rings, 747.

Maltz, Robert. The K-nullity spaces of the curvature operator, 358; Isometric immersions into spaces of constant curvature, 542.

Manaster, A. B. and Nerode, Anil. A universal property of order in recursive equivalence types, 735.

Mancill, J. D. On problems of the calculus of variations in the plane with both end-points variable, 358.

Mancuso, V. J. Retraction in m-paracompact spaces, 131.

Mandelker, Mark. Subspaces of F'-spaces, 128; Relative annihilators in lattices. I, 916; Relative annihilators in lattices. II, 1046.

Manes, E. G. A triple-theoretic construction of compact algebras, 236.

Mangeron, D. and Oğuztöreli, M. N. Optimal problems in a distributed parameter control system with applications to "polyvibrating" equations, 730.

Mann, L. N. and Sicks, J. L. Embeddings of compact Lie groups. Preliminary report, 147.

Manohar, Rampurka and Turnbull, C. On a modification of Romberg quadrature, 377.

Marcus, Marvin and Pierce, Stephen. Elementary divisors of associated transformations, 219.

Marden, Morris. On composite abstract homogeneous polynomials, 729.

Mardesic, Sibe. See Loncar, Ivan.

Marjanovic, M. M. A topological characterization of isometries, 231.

Markin, J. T. Fixed point theorems for set valued contractions, 373.

Marlin, J. A. See Ullrich, D. F.

Maron, M. J. Non-archimedian Hilbert spaces. Preliminary report, 393.

Martin, J. M. See Lickorish, W. B. R.

Martindale, W. S., III. Lie isomorphisms of simple rings, 100; When are multiplicative mappings additive?, 546; Lie isomorphisms of prime rings, 788.

Marx, M. L. Light open mappings on a torus with disk removed, 135.

Maserick, P. H. See Kist, J. E.

Mason, J. D. A necessary and sufficient condition that the limit distribution of a sequence of normed, centered sums of independent random variables involving r distributions be a convolution of r stable distributions, 651.

Mason, W. K. Homeomorphic continuous curves in 2-space are isotopic in 3-space, 143.

Mastin, C. W. Productively pseudo-compact spaces. Preliminary report, 939.

Mathias, A. R. D. On a generalization of Ramsey's theorem, 931.

Matras, Y. On a particular functional equation over groups, 624.

Mattamal, M. M. See Bogdanowicz, W. M.

Matula, D. W. The number of subtrees of an n-ary tree, 765.

Maxson, C. J. On near-rings of polynomials, 97.

Maxwell, J. G. A model for the inference mechanism of the mind and a weakness in present logics, 223.

Mayer, R. A. Deceptive convergence of Fourier series, 921.

Mayoh, B. H. Bounds on the cyclotomic polynomials, 384.

Mazeres, Reginald. On the relations between a semigroup and its square S^2, 1018.

Mazhar, S. M. On the local property of $|R, \log n, 1|_k$ summability of Fourier series, 649.

McAuley, L. F. Certain mappings which are topologically projections, 1023.

McAuly, P. T. A strong homotopy equivalence and extensions for Hurewicz fibrations, 812.

McCandless, B. H. On order paracompact spaces, 812.

McCann, C. J. Wiener-Hopf operators on locally compact groups, 659.

McClendon, J. F. Obstruction theory in non-orientable fiber bundles. Preliminary report, 1047.

McConnel, R. M. Functions over finite fields preserving mth powers, 119.

McCoy, R. A. Cells and cellularity in infinite-dimensional normed linear spaces, 518.

McCullough, T. A. Rational approximation on certain plane sets, 342.

McDonald, B. R. A class equation under row equivalence for matrices over a principal ideal domain modulo m, 508.

McDonald, J. N. Maximal measures and the Dirichlet problem of the Coquet boundary, 624.

McIntosh, A. G. R. On the closed graph theorem, 191.

McKay, James. See Higman, Graham.

McKenzie, Ralph. See Kostinsky, Alan.

McLaughlin, E. K. Extremal elements of the convex cone of positive semidefinite quadratic forms. Preliminary report, 356.

McLaughlin, H. W. See Diaz, J. B.

McLaughlin, H. W. and Metcalf, F. T. Behavior of the extended Hölder inequality with respect to the index set, 134.

McLaughlin, J. R. Haar series, 172.

McMillan, D. R., Jr. See Jaco, William.

McMillan, D. R. and Row, Harry. Tangled embeddings of one-dimensional continua, 767.

McMillan, E. R. Continuity conditions for functions, 811.

McMillan, J. E. On functions meromorphic in a disc, 159.

McNamara, J. N. Piecewise linear fibre bundles, 235.

McNabb, A. and Schumitzky, Alan. Factorization of integral operators. I: Algebraic theory, 1028; Factorization of integral operators. II: Numerical solution of Fredholm, 1029.

McNeill, R. B. Elementary theory of differential systems. Preliminary report, 107.

Mead, D. G. Semigroups satisfying some identity, 1028.

Megibben, Charles. A generalization of the classical theory of primary groups, 1025.

_____. See Hill, Paul.

Mendelsohn, Eric. Graph with given semigroup and V-A products, 942.

Merkel, R. B. Commutative ideal extensions of nil-semigroups, 338.

Merkel, R. B. and Fukushima, Mitsuo. Subsemigroups of finite cyclic semigroups, 1028.

Merkes, E. P. See Keogh, F. R.

Merrill, Samuel, III, and Lal, Nand. Characterization of certain invariant subspaces of spaces $H^2(dm)$ derived from logmodular algebras. Preliminary report, 758.

Mestecky, F. J. Varieties associated with filtrations, 226.

Metas, Nick. Some further reductions in the definition of an injective Banach space. Preliminary report, 361; Some further reductions in the definition of a projective Banach space. Preliminary report, 550.

Metcalf, F. T. See Diaz, J. B.; McLaughlin, H. W.

Metropolis, N. See Everett, C. J.

Meyer, D. V. More decompositions of n-space which are factors of (n+1)-space, 759.

Meyer, G. H. On a class of control problems in a Banach space, 371; The invariant imbedding equations for multi-point boundary value problems, 761.

Meyer, K. R. An estimate on the number of periodic solutions of an ordinary differential equation, 208.

Meyer, Karlhorst. On the spinornorm, 512.

Meyer, R. K. and Dunn, J. M. Entailment logics and material implication, 1021.

Meyers, D. E. A note on differentiable functions, 923.

Michael, Ernst. Bi-quotient maps and products of quotient maps, 100.

Michaels, J. G. Bimeasurable functions. Preliminary report, 229.

Michalowicz, J. V. Diagram lemmas in semi-exact JTK-categories, 752.

Miller, K. S. Nonstationary autoregressive processes, 937.

Miller, R. K. Integral equations with nonnegative integrable resolvents, 146.

Millett, K. C. Normal structures for locally flat embeddings, 740.

Millham, C. B. On the structure of equilibrium points of bimatrix games, 174.

Mills, W. H. and Zierler, Neal. On a conjecture of Golomb, 785.

Mirdeshwar, M. G. and Theckedath, Kishore. Boundedness in a topological space, 945.

Mitchell, Josephine. See Hahn, K. T.

Mitchell, Theodore. Fixed points and separately continuous actions of topological semigroups. Preliminary report, 99.

Mitchell, William. On the cardinality of dense subsets of linear orderings. II, 935.

Mitchem, J. A. A characterization of hypo-outer planar graphs. Preliminary report, 813.

Mizel, V. J. and Sundaresan, Kondagunta. Banach sequence spaces, 234.

Moeller, J. W. The inner function in Rota's model, 364.

Mohamed, S. H. See Jain, S. K.

Monk, J. D. Nonfinitizability of classes of cylindric algebras, 353.

Montgomery, R. G. Spec A as a set with algebraic structure. Preliminary report, 637.

Moon, J. W. A tree counting problem, 161.

Moon, J. W. and Pullman, N. J. Measuring the variation in the ranking of tournament participants, 350.

Moon, Parry and Spencer, D. E. Holor representation of nonsinusoidal quantities, 907.

Moore, H. G. and Yaqub, A. M. A generalization of Boolean rings, 101.

Moore, R. H. Approximations to nonlinear operator equations and Newton's method, 535.

Mordell, L. J. On some sextic diophantine equations of genus 2, 915.

Morris, P. D. See Cheney, E. W.; Guseman, L. F.; Lazar, A.

Morris, W. L. See Fulton, J. D.

Morrison, J. A. An averaging scheme for some nonlinear resonance problems, 101.

Morse, J. T. Cauchy completions for f-rings, 759.

Moschovakis, Y. N. See Chang, C. C.

Moser, W. O. J. Enumeration of certain classes of restricted combinations, 636.

Mosher, R. E. A product formula for a tertiary characteristic class, 222.

Mott, J. L. See Gilmer, R. W.

Motzkin, T. S. and Straus, E. G. Divisors of polynomials and power series with positive coefficients, 1027.

Moursund, D. G. See Loeb, H. L.

Moyer, R. D. See Lindahl, R. J.

Mozzochi, C. J. A generalization of a theorem of Alfsen and Fenstad, 188; A partial generalization of a theorem of Hursch, 347; A generalization of a theorem of Wolk, 541; On the completeness of a symmetric generalized uniform space. I, 623; Symmetric generalized uniform and proximity spaces, 733; On the completeness of a symmetric generalized uniform space. II, 809; On symmetric generalized uniform spaces. I, 937; On a uniform structure of Gál, 1045.

Mueller, B. J. On Morita-duality, 738; Dominant dimension of semiprimary rings, 782.

Mukherjea, Arunava. On idempotent probabilities on semigroups, 513; A Stone-Weierstrass type theorem for random functions, 936.

_____. See Tserpes, N. A.

Muller, G. M. Linear iteration and summability, 392.

Mullin, A. A. Intermediate topics in number theory. Preliminary report, 638; On an analogue of Jordan's totient, 781; On new analogues of Lucas' totient and Thacker's totient, 909; Additive representations with prescribed numbers of summands, 1039.

Murphy, C. M. See Benac, T. J.

Murphy, G. P. The Euclidean embedding problem, 372.

Murray, F. J. See Davis, H. W.

Muskat, J. B. On sign ambiguities in Gaussian sum relationships, 772; The cyclotomic numbers of order twenty, 1024.

Nadler, S. B. On sequences of contractions and their fixed points, 137.

Nagata, J.-I. See Siwiec, F. E.

Nail, B. R. On derivation algebras of commutative associative algebras. Preliminary report, 721.

Nakano, Hidegoro. Representations of a group by transformations on its subgroups, 506; Critical numbers, 724; Mapping law, 1030.

Nanzetta, Philip. Representation of relatively complemented distributive lattices, 115.

Narici, L. R. and Beckenstein, Edward. Riesz's lemma in non-archimedian spaces, 793.

Nasim, C. A divisor summation formula, 202.

Navot, Israel. The numerical integration of periodic analytic functions with many singularities near the range of integration, 754.

Nebb, Jack. A linear space. Preliminary report, 172.

Neggers, Joseph. Transvectors and endotensors. Preliminary report, 156.

Negrepontis, S. See Comfort, W. W.

Nelligan, J. D. A generalized Fourier-Stieltjes series representation of a singular bivariate probability measure. Preliminary report, 149.

Nelson, Edward. The Feynman time-ordered operator calculus. Preliminary report, 335.

Nelson, G. C. Reducibility orderings of the hyperarithmetic predicates, 1034.

Neri, Umberto. L^p estimates for certain nonlinear differential equations, 228.

Nerode, Anil. See Manaster, A. B.

Nestell, M. K. and Gibbs, A. G. An iterative solution of a nonlinear integral equation, 394.

Netto, A. B. Fuzzy classes. Preliminary report, 945.

Newcomb, R. L. Topologies compact modulo an ideal, 182.

Newman, D. J. See Byrnes, J. S.

Newman, D. J. and Raymon, Louis. Quantitative polynomial approximation on certain planar sets, 101.

Newman, M. F. The group-law $[x,y]^2 = [x,y,z]$, 911.

Newman, S. E. A class of convolution measure algebras. Preliminary report, 162.

Niebur, D. P. Poincaré series of positive dimension, 743.

Nilson, E. N. See Ahlberg, J. H.

Nobusawa, Nobuo. Crossed products of a division algebra, 390.

Nomizu, Katsumi and Smith, Brian. On holonomy groups of complex hypersurfaces. Preliminary report, 87.

Norman, Edward and Trench, W. F. Stability of certain differential equations with homogeneous right-hand sides, 796.

Norton, K. K. Upper bounds for Kth power coset representatives modulo n, 373.

Novinger, W. P. Zero sets for infinitely differentiable functions in the disc algebra, 816.

Novoa, L. G. On semiordered mathematical structures. Preliminary report, 142.

Nuhly, P. S. The characteristic operator function of a compact operator. Preliminary report, 795.

Oberai, K. K. On spectral permanence, 169.

Oberst, Ulrich. Exactness of direct and inverse limits, 538.

Oddson, J. K. On the boundary point principle for elliptic equations in the plane, 116.

Oğuztöreli, M. N. See Mangeron, D.

O'Hara, P. J., Jr. Convergence of complex Lagrange interpolation polynomials with nodes lying on a piecewise analytic Jordan curve with cusps, 117; A necessary condition in the theory of interpolation in the complex domain, 749.

Ohm, J. F. See Heinzer, W. J.

Okubo, Tanjiro. Complex and almost complex fibered spaces, 742.

Olech, Czeslaw. On the range of unbounded vector valued measure, 530.

Olesky, D. D. See Charmonman, S.

Olin, Philip. Łos subsystems of reduced powers, 805, 949.

Olson, J. E. A combinatorial problem on finite Abelian groups, 532.

O'Malley, M. J. R-automorphisms of R[[X]], 227.

O'Malley, R. E., Jr. Boundary value problems for linear systems of ordinary differential equations involving many small parameters, 141.

O'Meara, P. A. A metrization theorem, 84.

O'Neill, J. D. Complex cobordism and equivariant maps, 378.

Ore, Oystein and Stemple, Joel. On the four color problem, 196.

Ornstein, D. S. See Friedman, N. A.

Osher, Stanley. Stability of mixed implicit difference schemes, 148.

Osofsky, B. L. Homological dimension of commutative rings with linearly ordered ideals, 369, 949; Homological dimension in rings of continuous functions. Preliminary report, 656.

Ostrom, T. G. On the existence of involutions which are central collineations, 746.

Ostrow, E. H. A generalization of theorems of Plessner and Zygmund, 926; On a class of singular integrals, 1026.

Oum, Ki Choul. Bounds for the number of deficient values of entire functions whose zeros have angular densities, 618.

Outcalt, D. L. See Johnsen, E. C.

Outlaw, C. L. and Groetsch, C. W. Averaging iteration in a Banach space. Preliminary report, 180.

Owens, A. B. On replications of incidence sequences, 185.

Owings, Jim. Commuting recursive functions have a common fixed point. Preliminary report, 229.

Padmanabhan, A. R. Convergence in probability and allied results, 342.

Palmer, E. M. See Harary, Frank.

Palmer, T. W. Collectively compact sets which are totally bounded, 120.

Palmquist, P. H. Pointwise limits in the category of adjoint pairs, 537.

Panday, J. N. An extensin of Haimo's form of Hankel convolutions, 628; Complex inversion for the generalized Hankel convolution transformation, 920.

Pandey, J. N. and Zemanian, A. H. An extension of Tanno's form of the convolution transformation. Preliminary report, 378.

Park, Chull. An extension of Paley-Wiener-Zygmund integral, 1042.

Parker, E. T. Disproof of a conjecture of Harary and Palmer. Preliminary report, 911.

_____. See Reid, K. B.

Passman, D. S. See Coleman, D. B.

Patnaik, S. N. The Lefschetz number associated with set-valued maps, 661.

Payne, S. E. On the nonexistence of a class of configurations which are nearly generalized n-gons, 110.

Pearcy, Carl and Topping, David. Commutators and certain II_1-factors, 121.

Pederson, R. N. An extension of Grunsky's inequality with application to the coefficient problem, 362.

Peinado, R. E. N-ary relations, 349.

Pellicciaro, E. J. An ascent existence and uni-

queueness proof for linear ordinary differential equations, 918.

Peters, G. O. Boole series representing functions and Boole functions of negative degree, 171.

Peterson, Allan. The distribution of zeros of fourth order differential equations. Preliminary report, 529.

Peterson, E. L. Discrete complex functions with prescribed boundary values of residues, 719.

Peterson, Marcia and Swartz, William. Periodic solution of a third order equation, 82.

Petrucco, Oswald. An algebraic approach to axiom systems, 195.

Pettey, D. H. One-to-one continuous mappings into E^2, 165; Mappings onto the plane. Preliminary report, 947.

Pfeifer, G. L. The Stone-Čech compactification of an irreducibly connected space, 95.

Philipp, Walter and Stackelberg, O. P. Two limit theorems for continued fractions, 385.

Phillips, Keith and Taibleson, Mitchell. Singular integrals in several variables over a local field, 622.

Pierce, Stephen. See Marcus, Marvin.

Pimbley, G. H. A comparison of two conditions against secondary bifurcation of eigenfunctions of Hammerstein operators, 206.

Pincus, D. F. Comparison of independence results in Mostowski's system (G) and in Zermelo-Fraenkel set theory, 234.

Pinsky, M. A. Hitting properties of degenerate diffusion processes, 385.

Pinter, Charles. Simplifing Boolean formulas by Δ-decomposition, 804.

Pippert, R. E. See Beineke, L. W.

Pirtle, E. M., Jr. Some results on almost-Dedekind domains, 746; Integral domains which are almost-Krull, 1040.

Pittnauer, Franz. Holomorphic functions with prescribed asymptotic expansions, 918.

Pitts, G. G. See Layman, J. W.

Platt, C. R. Iterated limits of universal algebras, 785.

_____. See Grätzer, G. A.

Plemmons, R. J. See West, M. T.

Plotkin, J. M. Generic embeddings, 807.

Poinsignon, M. O. Inner translations of a semiring, 784; Green's relations on a semiring, 909; Semirings which are union of division rings, 1039.

Pokropp, Fritz. Coupled maps on groups and derived structures, 101.

Pollard, Harry. Singularities of the n-body problem. I, 631.

Pollard, Jean. On extending homeomorphisms on zero-dimensional spaces, 77.

Pop-Stojanovic, Z. R. On spherical stochastic processes on a locally compact group, 182.

Poritz, A. B. An application of the Cauchy-Kowalewski theorem in Riemannian geometry, 167.

Porsching, T. A. See Hall, C. A.

Porter, A. D. Orthogonal similarity for symmetric matrices, 142.

Porter, J. R. On locally H-closed spaces, 159.

_____. See Bonnett, D. A.

Pothoven, Kenneth. Projective and injective objects in the category of Banach spaces, 813.

Powderly, M. E. Some problems of Hewitt on expansions of topological spaces, 358.

Powell, J. D. Representation theory for locally convex*-algebras, 528.

Powell, R. E. See Boehme, T. K.

Prasad, J. See Sharma, A.

Prasad, Jagdish and Verma, A. Characterisation of some orthogonal polynomials, 796; An analogue of a problem of J. Balazs and P. Turan. III, 924.

Prenter, P. M. A Weierstrass theorem for separable Hilbert space, 741.

Pretzel, Oliver. The Mayer-Vietoris sequence for higher projective and inductive limits, 529.

Price, T. M. Decompositions of S^3 and pseudo-isotopies, 136.

Proctor, C. W. A separable pseudonormal nonmetrizable Moore space, 1011.

Proctor, T. G. Characteristic multipliers for some periodic differential equations, 1023.

Pullman, N. J. See Moon, J. W.

Pursell, L. E. Rings of continuous functions on open convex subsets of R^n, 203.

Ragozin, D. L. Uniform convergence of spherical harmonic expansions, 621.

Rahman, O. I. See Goodman, A. W.

Raimi, R. A. On the first digit problem, 352.

Ramanujan, M. S. Vector sequence spaces and perfect summability matrices of operators in Banach spaces, 526.

Rao, M. R. M. See Kayande, A. A.

Rao, V. V. Functional equations of Dirichlet series arising from a class of nonanalytic automorphic forms, 377.

Raphael, R. M. An algebraic closure for commutative regular rings with 1, 945.

Ratliff, L. J., Jr. On quasi-unmixed local domains, the altitude formula, and the chain condition for prime ideals, 388.

Ratti, J. S. See Goodman, A. W.

Ray-Chaudhuri, D. K. and Wilson, R. M. Solution of the Kirkman's school girl problem, 648.

Raymon, Louis. See Newman, D. J.

Read, T. T. Analytic structure in the spectrum of a Banach algebra. Preliminary report, 140; Analytic structure in the spectrum of a Banach algebra. II. Preliminary report, 763.

Reay, J. R. More about Radon's theorem, 98; Projections of f-vectors of 4-polytopes, 620.

Reddy, W. L. Pointwise expansive homeomorphisms, 631.

_____. See Hemmingsen, Erik.

Reed, T. J. The boundary correspondence of quasiconformal mappings on quasicircles, 157.

Rees, C. S. On the absolute Norlund summability of a Fourier series, 80.

Regan, Francis. See Cassens, Patrick.

Reich, Edgar and Strebel, Kurt. Quasiconformal mappings which keep boundary points fixed, 227; Quasiconformal mappings which keep boundary points fixed, 539.

Reichelderfer, P. W. See Brooks, J. K.

Reichhardt, R. W. Representations of linear operators on quasicontinuous functions, 535.

Reid, K. B. On sets of arcs containing no cycles in a tournament, 763.

Reid, K. B. and Parker, E. T. Disproof of a conjecture of Erdös and Moser on tournaments, 787.

Reid, W. T. Comparison theorems for nonlinear vector differential equations, 164.

Reilly, R. C. Integral formulas for closed submanifolds. Preliminary report, 381; An improved density theorem for closed minimal submanifolds of spheres. Preliminary report, 779.

Reiner, Irving. See Lam, T. Y.

Reiter, H. B. α-realcompact spaces, 1021.

Reneke, J. A. On the existence and representation of integrals, 522.

Renggli, H. J. Triangular dilatation and quasiconformal mapping, 514.

Reyes, G. E. Generalized definability for countable models, 547.

Ribeiro, H. B. On atomisticity in dependence algebras, 611.

Rice, P. M. Free actions of Z_4 on S^3, 523.

Richards, J. W. An incomplete generalization of Fröbenius's theorem. Preliminary report, 138.

Richardson, R. W., Jr. Rigid analytic subgroups of Lie groups, 350.

Richetta, P. J. See Brace, J. W.

Ridge, W. C. Composition operators. Preliminary report, 924.

Rieffel, M. A. Multipliers and tensor products of L^p spaces of locally compact groups, 363.

Rieger, G. J. A number theoretic application of a Tauberian theorem with remainder term, 657; Polynomials and almost-primes, 740.

Riles, J. B. The near Frattini subgroups of finitely generated groups, 183.

Riley, J. P., Jr. Decompositions of E^3 with a compact zero-dimensional set of nondegenerate elements, 514.

Ritter, I. F. An algorithmic definition of the characteristic polynomial of a matrix, 910.

Riviere, N. M. and Sagher, Y. On multipliers of trigonometric series, 203.

Roach, E. D. A convergence theorem about quasi-continuous functions, 393.

Roach, F. A. Continued fractions over an inner product space. Preliminary report, 521.

Robert, A. F. On the computation of subsonic and transonic flow patterns. Preliminary report, 384; A numerical procedure for the determination of compressible fluid flows, 611.

Roberts, J. W. A countably generated Boolean σ-algebra which admits no nontrivial measure, 357.

Robertson, J. B. See Keynes, H. B.

Robertson, Lewis. Irreducibility of certain induced representations, 343.

Rockafellar, R. T. See Gale, David.

Rodriguez, R. S. Angular and oricyclic cluster sets for normal meromorphic functions. Preliminary report, 528.

Roetman, E. L. See Guenther, R. B.

Rogers, E. H. Variational properties of nonlinear spectra, 175.

Rogers, J. T., Jr. Pseudo-circles and universal circularly chainable continua. Preliminary report, 118; The pseudo-circle is not homogeneous, 943.

Rogers, J. W., Jr. Continua which contain only

degenerate continuous images of plane continua, 522; Continua not an inverse limit with a single bonding map on a polyhedron, 1010.

Roggenkamp, K. W. Extensions of lattices over orders, 102.

Rolfsen, D. P. A generalization of an isotopy invariant of Chen and Milnor, 657.

Rose, G. F. Closures which preserve finiteness in families of languages, 380.

Rose, K. L. An exhaustive search procedure for integers whose fourth power is the sum of four fourth powers of integers, 1018.

Rosenberg, A. E. On the semisimplicity of the group algebra, 646.

Rosenberg, A. L. Scan limited Turing machines, 803.

Rosenberg, Milton. Derivatives with respect to vector valued measures, 133.

Rosenbloom, P. C. Recursion algebras, 630.

Rosencrans, S. I. On Schwarzschild's criterion, 929.

Rosenfeld, M. See Bruckner, A. M.

Rosenkrantz, W. A. Some theorems on large deviations, 634; A rate of convergence for statistics of the Kolmogorov and von Mises type, 808.

Rosenthal, H. P. On quasi-complemented subspaces of Banach spaces. Preliminary report, 212; On complemented and quasi-complemented subspaces of quotients of C(S) for Stonian S, 647.

Rosenthal, P. L. Some uniqueness theorems for a series of Legendre polynomials, 157; On the zeros of the Bergman function in doubly-connected domains, 648; On fields which are plus and dot related. Preliminary report, 912.

Rosenthal, P. L. and Skwarczynski, Macief. On a subclass of harmonic functions defined by the Bergman-Whittaker operator, 156.

Ross, K. A. See Hewitt, Edwin.

Rota, G.-C. Sperner's theorem for linear partitions, 815.

_____. See Crapo, H. H.

Roth, E. B. Conjugate space representations of Banach spaces, 1017.

Rothschild, B. L. See Krieger, M. M.

Rourke, C. P. and Sanderson, B. J. An embedding without a normal microbundle, 187.

Row, Harry. See McMillan, D. R.

Rowland, J. H. On the location of the deviation points in Chebyshev approximation, 132.

Royden, H. L. The nonuniqueness of extremal quasiconformal maps, 540.

Rubel, L. A. See Gaer, M. C.

Rubel, L. A. and Ryff, J. V. The bounded weak-star topology on the bounded analytic functions, 756.

Rubin, A. L. and Rubin, J. E. Extended operations and relations on the class of ordinal numbers. Preliminary report, 196.

Rubin, J. E. See Rubin, A. L.

Rubinstein, Zalman and Chase, W. E. Covering theorems, 799.

Ruh, E. A. On nonparametric minimal hypersurfaces. Preliminary report, 749.

Rund, Hanno. A new canonical formalism for multiple integral problems in the calculus of variations, 393.

Rushing, T. B. Unknotting locally flat embeddings by isotopy, 525.

Russell, M. J. Upper semicontinuous decompositions of continua irreducible about a finite subset, 1018.

Rutter, E. A., Jr. Some characterizations of quasi-Fröbenius rings, 177.

_____. See Colby, R. R.

Ryan, B. F. An imbedding in the isols, 559.

Ryan, P. J. Complex hypersurfaces with $R(X,Y) \cdot R = 0$, 748; Homogeneity and some curvature conditions for hypersurfaces, 802.

Ryff, J. V. See Rubel, L. A.

Saade, Marshall. Some varieties of groupoids, 104.

Sabbagh, L. D. Variational problems with lags, 348.

Sade, Albert. Autotopies des quasigroupes, 374; Autotopies des systèmes associatifs, 543; Quasigroupes parastrophiques: Groupe des automorphismes gauches, 627; Evanescence de l'argument de Cantor pour le cardinal des reels, 784; Lacune dans l'argument qui établit la non-équivalence d'un ensemble et de son Booléien, 930; Ensemble puissance, 1044.

Sadr, M. T. Topogeneous structures on a category, 1034.

Saff, F. B. Approximation by rational functions of type (n, ν), 210; Interpolation to meromorphic functions, 789.

_____. See Walsh, J. L.

Saffern, W. W. Rational approximation. III, 946.

Sagher, Y. See Riviere, N. M.

Sah, C. H. See Charlap, L. S.

Saha, F. See Gupta, R. N.

Sahney, B. N. On the summability of a class of derived Fourier series, 202; A relation between absolute Abel summability and convergence, 919.

Salter, K. C. On G-algebra extensions. Preliminary report, 108.

Sanderson, B. J. See Rourke, C. P.

Sanderson, D. E. An infinite-dimensional Schoenflies theorem, 535.

Sanderson, D. F. On the cohomology of completely primary rings, 138.

Sandomierski, F. L. and Smith, D. E. Rings for which finitely generated flat modules are projective, 817.

Sankaran, N. Henselization and rings of formal power series, 206.

Santos, E. S. On maximin chains, 728.

Sarafyan, Diran. Sixth order Runge-Kutta formulas possessing error estimation property, 759.

Sarafyan, Diran and Guillot, E. Investigation about the algebraic equations associated with Runge-Kutta method, 154.

Sastry, M. S. K. Meta-analytic functions. Preliminary report, 336.

Sather, D. and Sather, J. O. The Cauchy problem for an elliptic operator which changes classification on the boundary, 178.

Sather, J. O. See Sather, D.

Sato, Daihachiro. See Amemiya, Ichiro.

Savitch, W. J. Deterministic simulation of nondeterministic Turing machines. Preliminary report, 943.

Saworotnow, P. P. Generalized positive definite functions and certain representations of a topological group, 747.

Sawyer, S. A. Continuous functions which attain every level line at most finitely often, 213.

Saxon, S. A. and Levin, M. D. On determining barrelled subspaces of barrelled spaces, 776; Every countable-codimensional subspace of a barreled space is a barreled space, 1020.

Scarborough, C. T. Closed graphs and closed projections, 183.

Schaefer, Paul. Transformations of almost convergent sequences, 654.

Schattschneider, D. J. An isomorphism theorem for a reduced Weyl group, 227.

Schechter, Martin. Riesz operators and Fredholm perturbations, 791; Semi-Fredholm perturbations, 917.

Schnare, P. S. Infinite complementation in the lattice of topologies, 109.

Schneider, J. E. Some results in the theory of primes, 92.

Schneider, Louis. The solution of equipment reliability and maintainability problems by queueing methods, 224.

Schneider, W. J. See Barth, K. F.

Schober, Glenn. Continuity of curve functionals and a technique involving quasiconformal mapping, 533.

Schoen, A. H. Infinite regular warped polyhedra (IRWP) and infinite periodic minimal surfaces (IPMS), 727; Infinite quasi-regular warped polyhedra (IQRWP) and skewness of regular polygons, 801; Regular saddle polyhedra (RSP), 929.

Schori, R. M. See Anderson, R. D.

Schrack, G. F. Lower bounds to the abscissa of stability of stable polynomials, 726.

Schrandt, R. G. See Everett, C. J.

Schreiber, B. M. Measures with bounded convolution powers. Preliminary report, 174.

Schumaker, L. L. See Jerome, J. W.

Schumitzky, Alan. On the equivalence between matrix Riccati equations and Fredholm resolvents, 340.

_____. See McNabb, A.

Schurer, F. See Cheney, E. W.

Schurer, F. and Cheney, E. W. The norms of interpolating spline operators, 790.

Schwartz, A. L. Local properties of Hankel transforms, 739.

Sconyers, W. B. A note on $\mathfrak{M}$-paracompact spaces, 230; Concerning the Lindelöf property, 342.

Scott, W. R. and Gross, Fletcher. Solvable products of groups, 158.

Sedinger, Harry. One-dimensional branches of eigenvectors of nonlinear, compact operators. Preliminary report, 534.

Seeback, C. L., III. See Bryant, J. L.

Seever, G. L. A Hahn-Banach theorem for commutative semigroups with identity, 221.

Segal, Irving. Nonlinear local functions of weak random processes, 335.

Segal, S. L. Tauberian theorems for Dirichlet convolutions, 145.

Sehgal, S. K. Automorphisms of integral group rings, 185.

Seidman, T. I. Approximation of C_0 semigroups, 129.

Seifert, G. See Fink, A. M.

Seifert, R. L., Jr. On prime binary relational structures, 653.

Seitelman, L. H. A van der Corput-like sequence for numerical integration, 389.

Sember, J. J. Conull and coregular variation domains, 351.

Senechalle, D. A. Isometry between two-dimensional subspaces implies an inner product, 529.

Sentilles, F. D. and Taylor, D. C. Factorization in Banach algebras and the general strict topology, 510.

Seo, T. K. A note on solvable factorizable groups, 172.

Serrin, J. B. A new proof in differentiation theory, 1036.

Shachtman, Richard. The Pettis-Stieltjes stochastic integral, 808; Sample paths of bounded variation, 936.

Shafer, John. See Tamura, Tokayuki.

Shah, S. M. Entire functions satisfying a linear differential equation. II, 214.

_____. See Krishna, J. G.

Shah, S. M. and Trimble, S. Y. Univalent functions with the property that derivatives of all order are univalent, 734; Univalent functions with the property that derivatives of all orders are univalent. II, 759.

Shankar, Hari. Proximate orders and exceptional values of a meromorphic function, 518.

Shapiro, H. L. See Alo, R. A.

Sharma, A. See Atkinson, K. E.

Sharma, A. and Prasad, J. On Abel-Hermite-Birkhoff-interpolation, 193.

Shelah, Saharon. Classes with homogeneous models only, 803; Categoricity in power, 930.

Sher, R. B. Geometric embedding invariants of simple closed curves in three-space, 387; A result on unions of flat cells, 777.

_____. See Alford, W. R.

Sherman, M. J. The eigenfunctions of certain inner functions, 153.

Shershin, Tony. Results concerning the Schutzenberger-Wallace theorem, 185.

Shiffman, Max. A theory of manimax. I, 339.

Shiflett, R. C. On extreme doubly stochastic measures and Feldman's conjecture, 743.

Shilkret, Niel. Non-Archimedean Banach algebras. Preliminary report, 634; Non-Archimedian Gelfand theory. Preliminary report, 789.

Shilleto, J. R. The arithmetic of standard models of ZF, 549.

Shinohara, Yaichi. On the signature of knots. Preliminary report, 1011.

Shive, R. A. See Johnson, W. B.

Shores, T. S. A note on classes of groups, 201.

Shulman, L. A. Perturbations of unitary transformations, 816.

Sibley, D. A. A metric for weak convergence of distribution functions, 808.

Sibner, L. M. A boundary value problem for an equation of mixed type having two transitions, 385.

Sibuya, Y. See Harris, W. A., Jr.

Sicks, J. L. See Mann, L. N.

Siddiqi, A. H. Fourier series with positive coefficients. I, 638; Fourier series with positive coefficient. II, 789.

Siddiqi, J. A. On the nontotality of a weighted lacunary sequence, 350; On the quasi-analyticity of a class of infinitely differentiable functions, 777.

Siebenmann, L. C. Two consequences of topological engulfing, 658; A torsion invariant for bands, 811.

Sieradski, A. J. See Dyer, M. N.

Sigmon, Kermit. On imbedding medial topological groupoids, 117.

Sigrist, F. See Douglas, R. R.

Sikkema, C. D. Cellular arcs in 3-space have shrinking points, 107.

Silberger, D. M. The parity of the integer $(2n-2)!/n!(n-1)!$, 615; Borders and roots of words, 752.

Simon, Hermann. On a class of solvable groups of even order, 104.

Simpson, J. E. On existence of Arens-multiplication, 768.

Simpson, R. B. Convergence of dynamic relaxation (second order Richardson's method), 103.

Sims, B. T. Some generalizations of the contraction mapping theorem. Preliminary report, 620.

Sims, C. C. Permutation groups, some computational problems, 1032.

Singer, Ivan. See Davis, W. J.

Singh, K. L. On fixed point theorem, 149; Commuting functions and common fixed points, 239; Contraction mappings and fixed point theorems, 546; Commuting polynomials and

common fixed points, 777; A note on contractive mappings in uniform spaces. Preliminary report, 796.

Singh, K. L. and Gardner, B. Contractive mapping in uniform spaces, 548.

Singh, K. L. and Singh, S. P. Contractive mappings in uniform spaces, 938.

Singh, S. P. On fixed point theorems, 388; A fixed point theorem in uniform space, 534.

_____. See Singh, K. L.

Singh, Surjeet. Pseudo-injective modules. Preliminary report, 648.

_____. See Jain, S. K.

Sinkhorn, R. D. Concerning a conjecture of Marshall Hall, 753.

Sion, M. See Mallory, D. J.

Siwiec, F. E. Metrizability of M-spaces, 224.

Siwiec, F. E. and Nagata, Jun-Iti. A note on nets and metrization, 659.

Skala, Helen. Modularity implication in sets with projective laws, 210; Modular sublattices of projective structures, 371; Independent elements in projective structures, 727; Group-like Menger algebras, 1035.

Skard, T. G. H. Axiomatic algebra of regular expressions, 558.

Skibinsky, Morris. The class of distributions on [0,1] all of whose normalized moments are equal, 357.

Skwarczynski, Maciej. The invariant distance in the theory of pseudo-conformal transformations and the Lu-Qi-Keng conjecture, 611.

_____. See Rosenthal, P. L.

Slack, Stephen. A cellularity criterion in certain 3-manifolds, 215.

Slater, M. B. Some radicals for alternative rings, 195; The Wedderburn-Artin theorem for alternative rings, 382; The socle of an alternative ring, 552; Upper radicals and Andrunakievic classes, 915.

Slaughter, F. G., Jr. Inverse images of closed mappings. Preliminary report, 724.

Smith, Brian. See Nomizu, Katsumi.

Smith, C. R. A measure-theoretic generalization of convexity. Preliminary report, 644.

Smith, D. E. See Sandomierski, F. L.

Smith, D. R. See Conway, E. D.

Smith, J. C., Jr. Characterizations of metric-dependent dimension functions, 78.

Smith, J. H. A remark on class groups of extensions with certain types of Galois groups, 138.

Smith, K. J. On the rank of incidence matrices in finite geometries. Preliminary report, 193.

Smith, S. W. Remarks concerning the cone of a Schauder basis. Preliminary report, 1014.

Smith, T. J. See Casler, B. G.

Smith, W. W. Projective ideals of finite type. Preliminary report, 94.

Smithson, R. E. Topologies generated by relations, 162; Uniform convergence for multifunctions. Preliminary report, 733.

Soare, R. I. Sets with no subsets of higher degree. Preliminary report, 513; Sets with no subset of higher arithmetic degree, 644; Degrees of subsets, 933.

Sobczyk, Andrew. Isometries of normed linear spaces, 760.

Solomon, D. W. Denjoy-Khintchine integration in abstract spaces. I. Preliminary report, 222; On nonmeasurable sets, 545.

Somayajulu, Al. Convolution involving the Möbius function and an analogue of Selberg's formula, 1034.

Soni, Kusum. A transform related to Sonine operators, 725.

Spencer, D. E. See Moon, Parry.

Spezeski, W. J. A bound for polynomials, 767.

Spira, R. S. Inequalities for Dirichlet L-functions, 776.

Spitznagel, E. L. Terminality of maximal unipotent subgroups of Chevalley and Steinberg groups, 137.

_____. See Dornhoff, L. L.

Springestell, F. N. Turing machines and marking automata languages, 806.

Srinivascharyulu, K. Hirzebruch manifolds, 359.

Srivastava, H. M. Finite summation formulae associated with a class of generalized hypergeometric polynomials, 231; On q-generating functions and certain formulas of David Zeitlin. Preliminary report, 341; An extension of Hille-Hardy formula. Preliminary report, 634; On an extension of the Mittag-Leffler function. Preliminary report, 736; A multiplication formula association with Lauricella's hypergeometric function F_A, 924.

Srivastava, H. M. and Vyas, Om Dutta. A theorem relating generalized Hankel and Whittaker transforms, 615.

Srivastava, S. and Zischka, K. A. Radiation condition and uniqueness theorem for n-dimensional reduced wave equation in an infinite domain, 928.

St. Mary, D. F. Oscillation and comparison theorems for a second-order linear differential equation, 509.

Stackelberg, O. P. See Philipp, Walter.

Stafney, J. D. The spectrum of an operator on an interpolation space, 115.

Stasheff, J. D. The image of J as a space mod $p > 2$, 391.

Stein, F. M. See Henry, M. S.

Steiner, A. K. and Steiner, E. F. Products of compact metric spaces are regular Wallman, 376.

Steiner, E. F. See Steiner, A. K.

Steinlage, R. C. On Ascoli theorems and the product of k-spaces, 114.

Stemple, Joel. See Ore, Oystein.

Stenger, W. G. A new method for obtaining upper bounds for the eigenvalues of Schrödinger type operators, 375.

Stephen, G. G. Toeplitz operators associated with the Hankel transform. Preliminary report, 791.

Stephenson, R. M., Jr. Pseudocompact spaces, 119.

Stepp, James. Topological groups in the boundary of a locally compact connected abelian group, 150.

Stern, J. L. Characterization of contractible open manifolds, and an equivalence between pointlike maps and cellular maps, 216.

Stevens, R. R. On the forced Liénard equation, 155.

Stewart, M. J. See Chartrand, G.

Stolarsky, K. B. A lower bound for the Scholz-Brauer problem. Preliminary report, 357.

Stolberg, H. J. Triple and Eilenberg Mac Lane cohomology for Hopf algebras, 782.

Stoltenberg, R. A. On quasi-metric spaces, 152.

Stone, A. P. Higher order conservation laws, 209.

_____. See Blair, D. E.

Storvick, D. A. See Cameron, R. H.

Strand, J. L. Generalized stochastic ordinary differential equations 342; Differentiable Markov processes, 748.

Stratton, H. H. See Brown, H. I.

Straus, E. G. See Motzkin, T. S.

Strauss, Aaron and Yorke, J. A. Perturbing uniformly stable linear systems, 731.

Strebel, Kurt. See Reich, Edgar.

Strecker, G. E. See Herrlich, H.

Struble, R. A. An algebraic characterization of distributions, 905.

Suffridge, T. J. On univalent polynomials, 546.

Sugar, A. C. The nature of a crucial inadequacy in the theory of relativity, 207.

Suh, Tae-Il. Algebras formed by the Zorn vector matrices, 769.

Sullivan, Dennis. K-theory and piecewise linear topology, 187.

_____. See Cohen, Marshall.

Sullivan, F. E. Structure of real L^p-spaces, 798; V^p spaces are L^p spaces, 917.

Sullivan, F. E. and Cohen, H. B. Von Neumann algebras in smooth spaces, 922.

Sullivan, H. D. Time structures for abstract polysystems, 735.

Summers, W. H. See Collins, H. S.

Sumners, D. L. Homotopy torsion in codimension two knots, 92.

Sundaresan, Kondagunta. Smooth Banach spaces, 941.

_____. See Mizel, V. J.

Swann, D. W. Some results concerning composite kernels and absolutely convergent generalized Fourier series, 753.

Swartz, B. K. $O(h^{2n+2-m})$ bounds on some spline interpolation errors, 111.

Swartz, William. See Peterson, Marcia.

Sweet, R. A. Approximation to the beam equation, 199.

Swenson, E. V. Geometry of the complex characteristics in transonic flow, 113.

Szeptycki, Pawel. Some remarks on the evolution equation and semigroups. Preliminary report, 114.

Tabor, C. D. On extended topologies, 231.

Taibleson, M. H. See Hunt, R. A.

_____. See Phillips, Keith.

Tamano, Hisahiro. Linearly cushioned refinements, 229; Paracompactness of strong products, 345.

Tamura, Takayuki. Homogeneous homomorhism and general products of semigroups, 368; Commutative semigroups whose lattice of congruences is a chain, 1028.

Tamura, Takayuki and Etterbeek, Wallace. Some commutative semigroups, 368.

Tamura, Takayuki and Shafer, John. Power semigroups. II, 395.

Tarwater, J. D. and Entringer, R. C. Sums of complexes in torsion-free abelian groups, 525.

Taussky, Olga. Automorphs and generalized automorphs of quadratic forms treated as characteristic value relations, 388; A generalization of matrix commutativity, 786; Hilbert's Theorem 94, 1037.

Taussky, Olga and Zassenhaus, H. J. On the I-cohomology of the general and special linear groups. I, 912.

Taylor, D. C. See Sentilles, F. D.

Taylor, G. D. On approximation by polynomials having restricted ranges, 355.

Taylor, J. W. Convergent tonets in t_1. Preliminary report, 792.

Taylor, M. D. An upper bound for the number of wild points on a 2-sphere, 1010.

Taylor, W. F. Atomic compactness and graph theory. Preliminary report, 396; Compactness and chromatic number, 1048.

Teller, J. R. Extensions of pseudo lattice ordered groups. Preliminary report, 118.

Teply, M. L. Torsionfree injective modules, 188; Some aspects of Goldie's torsion theory, 347.

Tewarson, R. P. Methods of projection for the solution of sparse linear system of equations, 374; On Chebyshev solution of inconsistent linear equations, 734.

Theckedath, Kishore. See Mirdeshwar, M. G.

Thomason, S. K. Some initial segments of the hyperdegrees, 98.

Thompson, A. H. Rotating time-like congruences in general relativity, 185.

Thompson, B. B. A property of real-valued continuous functions on compact intervals, 390.

Thompson, R. C. Principle submatrices, 344.

Thuraisamy, Vaithilingam. On finite difference methods for mixed boundary value problems, 395.

Tidmore, F. E. Extremal structure of star-shaped sets, 401.

Tondra, R. J. Characterization of connected 2-manifolds without boundary which have finite domain rank, 810; The domain rank of an n-sphere and an n-cell, 940.

Tong, A. E. Diagonal nuclear operators. Preliminary report, 218.

Topping, David. See Pearcy, Carl.

Toralballa, L. V. Piecewise flatness and surface area, 105.

Townsend, C. G. See Burton, T. A.

Tramel, S. J. On Artin equivalence and Krull rings. II. Preliminary report, 558.

Trench, W. F. See Norman, Edward.

Treybig, B. An approach to the polygonal knot problem using projections and isotopies, 652.

Trimble, S. Y. See Shah, S. M.

Troesch, B. A. Isoperimetric bound for eigenvalue, 184; A Stekloff problem in an infinite domain, 1026.

Trudinger, N. S. Interpolation of linear operators on L_p spaces, 796.

Tserpes, N. A. On a theorem of L. N. Argabright, 356; A characterization of idempotent probabilities on left groups, 636; On a theorem of Hewitt, 644; On invariant atomic measures on semigroups, 817; Invariant measures on semigroups, 917; On a compactness condition and idempotent probability measures, 1041.

Tserpes, N. A. and Mukherjea, A. On semi-invariant and idempotent measures on semigroups. Preliminary report, 558.

Tsokos, C. P. On a stochastic integral equation of the Volterra type, 767.

_____. See Lakshmikantham, V.

Tucker, D. H. Boundary value problems for linear differential systems, 215.

_____. See Kurtz, L. C.

Tucker, Lloyd. A characterization of semigroups which are unions of groups, 375.

Tuckerman, Bryant. Odd perfect numbers: A search procedure, and a new lower bound of 10^{36}, 226.

Turnbull, C. See Manohar, Rampurker.

Tymchatyn, E. D. A one-parameter subsemigroup which meets many regular $\mathcal{D}$-classes, 353; Partially ordered spaces with the product topology, 643.

_____. See Ward, L. E., Jr.

Uehara, Hiroshi and Brenneman, F. S. On a cohomology theory in a fibred category, 369.

Uehara, Hiroshi and Dowdy, J. E. Distinguishability of the monoid semimodule in the category of transition systems, 800.

Uhl, J. J., Jr. Compact operators on Orlicz spaces, 126.

Ullman, J. L. See Lyndon, R. C.

Ullrich, D. F. and Marlin, J. A. Periodic solutions of a second order nonlinear differential equation without damping, 182.

Ulmer, Fritz. Satellites and Kan functor extensions, 398; Properties of Kan extensions, 518.

Underwood, D. H. On some uniqueness questions in primary representation of ideals, 729.

Ungar, G. S. Local homogeneity, 103.

Van Buskirk, J. M. See Gillette, R. M.

Van Meter, G. The number of solutions of some equations and systems in a finite field, 779.

Van Vleck, F. S. See Himmelberg, G. J.

Vancko, R. M. On the system of locally independent subsets of a universal algebra, 560.

Varadhan, S. R. S. Diffusion processes in a small time interval, 335.

Vasco, C. E. Homogeneous identities on algebraic loops. Preliminary report, 238.

Vaughan, J. E. Linearly ordered collections and paracompactness, 768.

Vayo, H. W. Green's function for a spherical cell, 171.

Vegh, Emanuel. Primitive roots modulo a prime as consecutive terms of an arithmetic progression, 130.

Verma, A. See Prasad, Jagdish.

Villone, A. L. Spectral resolution of self-adjoint analytic differential operators. Preliminary report, 153.

Vilms, Jaak. Tension field of the Gauss map, 753.

Voxman, W. L. Nondegenerately continuous decompositions of E, 355; Decomposition of 3-manifolds and pseudo-isotopies, 547; On the shrinkability of decompositions of 3-manifolds, 649.

Vyas, Om Dutta. See Srivastava, H. M.

Wagner, F. J. Reflexive spaces and dual topologies, 130.

Wallen, L. J. A stability theorem for frames in Hilbert space, 355.

Walsh, B. J. Flux in axiomatic potential theory. II: Cohomology of Brelot sheaves, 922.

_____. See Loeb, P. A.

Walsh, J. L. See Ahlberg, J. H.

Walsh, J. L. and Saff, E. B. Extensions of D. Jackson's theorem on best complex polynomial mean approximation, 211.

Walter, Gilbert. Hermite series singularities, 170.

Walvekar, Arun. See DeCicco, John.

Wang, P. C. C. Optimality criterion of some special assignment problem, 386.

Ward, H. N. Automorphisms of quaternion-free 2-groups, 760.

Ward, L. E., Jr., and Tymchatyn, E. D. The least element map, 614.

Warfield, R. B., Jr. Algebraic compactness for modules. Preliminary report, 116.

Warne, R. J. Extensions of ω I-bisimple semigroups, 737; I-regular semigroups. I, 905; I-regular semigroups. II, 915; Homomorphisms of certain classes of regular semigroups, 1022.

Warren, Joseph. An estimation of the maximum modulus. Preliminary report, 235.

Warten, R. M. Stability in the small and the roots of the Jacobian matrix, 337; Stability in the small and the roots of the Jacobian matrix. II, 725.

Wasow, Wolfgang. A second-order differential equations with several simple turning points, 818.

Watkins, M. E. A topological problem in connectivity of graphs. II, 230; Connectivity of transitive graphs, 814.

Wayment, S. G. Absolute continuity and the Radon theorem, 517.

_____. See Easton, R. J.

Webb, G. F. Nonlinear contraction semigroups in weakly complete Banach space, 725.

Weber, J. K., Jr. See Davis, H. W.

Wei, D. Y. On the concepts of torsion and divisibility for general rings, 1032.

Weidmann, Joachim. See Gustafson, K. E.

Weinberg, L. See Harris, W. A., Jr.

Weinert, Hanns. On a generalization of semigroups by Hedrlin, 398.

Weinstein, A. D. Unflat bundles and metrics of positive curvature. Preliminary report, 527.

Weinstein, S. E. Approximations of functions of several variables, 360.

Weisfeld, Morris. Tensor products of F-vector spaces, 175.

Weiss, M. L. See Bruckner, A. M.

Weiss, N. J. Poisson integrals and differential properties of multiple integrals, 1038.

Weller, G. P. Locally flat imbeddings of topological manifolds, 651; Stonger results on locally flat imbeddings of topological manifolds, 940.

Wells, C. F. Split translations of groups. Preliminary report, 553; Split translations of groups, 913.

Wells, J. H. and Heard, E. A. An interpolation problem for subalgebras of H^∞, 1043.

Wend, D. V. V. Existence and uniqueness of solutions of ordinary differential equations, 89.

Wenjen, Chien. Rings of continuous vector-valued functions. II. Preliminary report, 344; Rings of continuous vector-valued functions. Preliminary report, 361; Daniell integral on abstract spaces. Preliminary report, 799.

Wenzel, G. H. Extensions of congruences of infinitary partial algebras, 180.

Werner, W. L. A double-centralizer theorem for simple associative algebras, 352.

West, M. T. and Plemmons, R. J. On the maximal subgroups of the semigroup of binary relations, 914.

Weston, J. H. m-compactness, m-quasicompactness, and m-pseudocompactness, 130.

Weston, K. W. See Krause, E. F.

Whipple, K. E. Hyperplanes in an incidence space, 1023.

White, G. K. Distributively related left groups, 545.

White, Warren. A 2-sphere in E^3 is tame if it is 1-LC through each complementary domain, 84.

Whitley, W. T. On f-ideals in rings of continuous functions, 551; f-ideals in rings of continuous functions, 816.

Whitlock, H. I. and Apter, John. Semilinear projective structures. Preliminary report, 1036.

Whyburn, C. T. Primitive roots in certain intervals, 83.

Wicke, H. H. A sum theorem for T_2-spaces having λ-bases locally, 660.

_____. See Worrell, J. M., Jr.

Wicke, H. H. and Worrell, J. M., Jr. Quasi-hereditary properties, Baire category, and non-first-countable structure, 162; On uniformly μ-complete mappings, 525; On monotonically complete subspaces of T_2-spaces having λ-bases locally, 659.

Widger, C. F. Multiplicative perturbations of infinitesimal generators of one-parameter semigroups. Preliminary report, 946.

Wigley, N. M. On the singularities of biharmonic functions with discontinuous boundary values. Preliminary report, 105.

Wignall, T. K. A generalized fixed-point theorem, 341.

Wilbur, W. J. On sets measurable and nonmeasurable by a regular measure. Preliminary report, 220.

Wilcox, C. H. The analytic continuation of the resolvent kernel in scattering theory, 226.

Wille, Rudolf. On a problem of B. Jonsson, 647; On primitive classes of lattices, 781.

Williams, C. M. See Hammer, P. C.

Williams, F. D. On higher Samuelson products, 117; C_n-commutativity of algebras, 753.

Williamson, J. A. Expected time in the half-line, 944.

Williamson, Jack. Entire functions with negative zeros and a problem of R. Nevanlinna, 720.

Willner, L. B. See Bradley, G. H.

Wilson, F. W., Jr. Lipschitz submanifolds, 108.

Wilson, R. L., Jr. Construction of a class of isotopy-isomorphy loops, 743.

Wilson, R. M. See Ray-Chaudhuri, D. K.

Winston, Elliot. Uniqueness of the zero solution for a nonlinear delay differential equation, 801.

Wogen, Warren. On generators for von Neumann algebras, 791.

Wolkowisky, J. H. Periodic solutions of nonlinear Sturm-Liouville problems, 86.

Wong, Y.-C. Order-infrabarrelled Riesz spaces, 651.

Wong, Y.-F. A theorem on homotopically equivalent (2k+1)-manifolds, 220.

Wood, Bruce. A generalization of the Bernstein polynomial, 125.

Wood, J. T. Algebraic reduction theory of W*-algebras, 656.

Woods, R. G. On a Boolean algebra of regular closed subsets of βX-X. Preliminary report, 1047.

Woodworth, W. L. Integrals over proto-rings. Preliminary report, 923.

Worrell, J. M., Jr. On continuous mappings of metacompact Čech complete spaces, 402; Paracompactness as a relaxation of full normalcy, 661; On embeddings of paracompact topological spaces, 766; On conditions of absolute θ refinability, 948.

_____. See Wicke, H. H.

Worrell, J. M., Jr., and Wicke, H. H. Concerning a class of completely regular spaces described by Arhangel'skiĭ, 352; On uniformly monotonically complete mappings, 561.

Wright, E. M. Graphs on many nodes with many edges, 814.

Wright, F. M. On integration-by-parts for a weighted integral and the Lebesgue-Stieltjes integral, 536; On mean g-summability, 761.

_____. See Baker, J. E.

Wright, F. M. and Baker, J. E. On weighted integrals and the Lebesgue-Stieltjes integral, 537.

Wright, F. M. and Klasi, Melvin. Necessary and sufficient conditions for mean g-summability, 1033.

Wright, Perrin. A uniform generalized Schoenflies theorem, 134.

Wulbert, D. E. Projections of norm 1 in C(X), 362.

_____. See Cheney, E. W.; Lazar, A.

Wulczyn, Gregory. Polynomials which after repeated division have remainders in arithmetic progression, 91.

Wyler, Oswald. The Stone-Čech compactification for limit spaces, 169.

Yang, K.-W. Completion of norm linear spaces, 132.

Yang, Y.-S. Stationary measures on branching processes. Preliminary report, 1048.

Yaqub, A. M. See Johnsen, E. C.

_____. See Moore, H. G.

Yasuhara, Mitsuru. Properties of Lp-languages--language rich enough to express that a set A is of less power than B, 179.

Yohe, J. M. Structure of hereditarily infinite dimensional spaces, 190.

York, J. A. See Strauss, Aaron.

Young, E. C. A Cauchy problem for a semi-axially symmetric wave equation, 112.

Young, S. W. Polynomial factors of light mappings on an arc, 95.

Zachariou, Andreas. Primary cohomology operations in the cobar construction--applications. Preliminary report, 359.

Zachmanoglou, E. C. Uniqueness of the Cauchy problem, 216.

Zadunaisky, P. E. On the asymptotic behavior of errors in the numerical integration of differential equations, 383.

Zaks, Joseph. On finite decompositions of (2n-1)-spaces, 619; On countably infinite decompositions of n-spaces, 643.

Zames, George and Freedman, M. I. Logarithmic variation criteria for L_2 stability of solutions of a class of integral equations, 209.

Zander, Vernon. See Bogdanowicz, Witold.

Zassenhaus, H. J. How to find the maximal order and the group of an algebraic number field, 1037.

_____. See Taussky, Olga.

Zee, Yun-Cheng. On quadratic decompositions associated with Jacobi sums, 771.

Zeitlin, David. On a class of generating functions, 557.

Zemanian, A. H. See Koh, E. L.

_____. See Pandey, J. N.

Zenor, Phillip. On the invariance of countable paracompactness under closed maps, 513; Z-mappings and WZ-mappings, 1014.

Ziemer, W. P. Extremal length and p-capacity, 790.

Zierler, Neal. See Mills, W. H.

Zimering, Shimshon. Some mercerian theorems for slowly varying sequences, 626.

Zischka, K. A. On the integral form of the Boltzman equation of neutron transport as applied to finite cells. Preliminary report, 800.

_____. See Srivastava, S.

Zlobec, S. and Ben-Israel, Adi. On explicit solutions of interval linear programs, 766.

Zund, Z. The projective line geometry of the Lanczos spinor, 1008.

INDEX Volume 15, 1968

ABSTRACTS OF CONTRIBUTED PAPERS, 77, 334, 465, 611, 719, 903, 1007
- Abstracts Presented by Title, 188, 347, 541, 623, 781, 909, 1039
- Errata-Volume 14, 241; Volume 15, 818, 949
- Index of Abstracts-Volume 15,

ACTIVITIES OF OTHER ASSOCIATIONS, 42, 293, 705, 854

ADVERTISERS, INDEX TO, 280, 415, 580, 667, 844, 963, 1059

ASSISTANTSHIPS AND FELLOWSHIPS
- In Mathematics in 1968-1969, 316
- In Mathematics in 1969-1970, 1065

DOCTORATES CONFERRED
- During January-June 1967, 60
- In 1967-1968, 877

FEATURE ARTICLES
- AMS Mathematical Offprint Service, 44, 595
- Annual Salary Survey, 869
- Case of Stephen Smale: Conclusion, 49
- Confinement of a Russian Mathematician, 597
- Defense Research: Questions for Vietnam Dissenters, 859
- Draft Dilemma Increases,
- Inquiry into the Problem of Page Charges, 449
- National Academy of Sciences-National Research Council, Abstract of Annual Report 1967-1968, 707
- Political Pressure vs Scientific Unity, 855
- Reviews in Algebraic Topology, 1004
- Right of Protest, 985
- Selected List of Stipends,
- Starting Salary for Mathematicians with a PH. D., 1003
- Tax Status of Grants,

LETTERS TO THE EDITOR
- Hyman Bass, 608, 711
- Hyman Bass, F. E. Browder, William Browder, S. S. Chern, Robert A. Herrmann, I. N. Herstein, E. R. Kolchin, S. Lang, M. Loeve, R. S. Palais, M. H. Protter, G. Washnitzer, 861
- P. T. Bateman, M. Gerstenhaber, J. J. Kohn, S. Lang, R. Palais, M. Protter, S. Smale, B. Yood, 609
- R. P. Boas, 711
- P. M. Cohn, 610
- A. N. Feldzamen, 53-298
- Murray Gerstenhaber, 609
- P. R. Halmos, 53
- J. R. Isbell, 861
- R. B. Kelman, 712
- Serge Lang, 297, 710, 997
- Arthur Matuck, Gian-Carlo Rota, 609
- Kenneth O. May, 712
- John T. Moore, 712
- Albert H. Mullin, 711
- Alexander Doniphan Wallace, 712
- J. Wolfowitz, 713
- Editors' Comments, 53, 711, 712

MEETINGS OF THE AMS
- Abstracts of Contributed Papers, 77, 334, 465, 611, 719, 903, 1007
- Calendar of Meetings, 2, 282, 418, 582, 670, 846, 966
- Preliminary Announcements
  - March: Los Angeles, California, 30
  - April: New York, New York, 39, 289; Durham, North Carolina, 41, 292; Chicago, Illinois, 40, 290
  - June: Portland, Oregon, 446
  - July: Berkeley, California, 293
  - August: Madison, Wisconsin, 447, 588
  - October: Baltimore, Maryland, 701
  - November: Clemson, South Carolina, 702, 850; Riverside, California, 703, 851; Evanston, Illinois 703, 852
  - December: Dallas, Texas, 984
  - January: New Orleans, 853, 979
- Programs of Meetings
  - January: San Francisco, California, 3
  - March: Los Angeles, California, 283
  - April: New York, New York, 419; Durham, North Carolina, 444; Chicago, Illinois, 431
  - June: Portland, Oregon, 583
  - August: Madison, Wisconsin, 671
  - October: Baltimore, Maryland, 847
  - November: Clemson, South Carolina, 967; Riverside, California, 972; Evanston, Illinois, 975
- Supplementary Program, 70, 326

MEMORANDA TO MEMBERS
- Backlog of Mathematical Research Journals, 294, 709
- Corporate Members and Institutional Associates, 296
- Different Categories for By-Title Abstracts, 587
- Edinburgh Mathematical Society Increases Annual Subscription, 998
- Mathematical Sciences Employment Register, 43, 451, 857
- Other Journals Available to Members at Reduced Rates, 295
- Periodicals Published by the London Mathematical Society, 858
- Proceedings of the American Mathematical Society, 59, 296
- Request for Names of Visiting Foreign Mathematicians, 587
- Resolution on the Draft, 587
- Retired Mathematicians, 857
- Summer Employment Opportunities, 858
- Supplementary Program, 451

NEW AMS PUBLICATIONS, 300, 448, 863, 999

NEWS ITEMS AND ANNOUNCEMENTS, 48, 52, 54, 312, 325, 333, 452, 594, 596, 601, 607, 610, 704, 706, 708, 715, 854, 856, 862, 865, 876, 1005. Erratum, 605

PERSONAL ITEMS, 61, 321, 455, 606, 717, 872, 1001. Errata, 69, 456, 607

RESERVATION FORMS, 416, 668, 964, 1060

SUMMER INSTITUTES AND GRADUATE COURSES, 302, 457

VISITING FOREIGN MATHEMATICIANS, 60, 714 987